

**WAR AS AESTHETIC: THE PHILOSOPHY OF CARL VON CLAUSEWITZ
AS THE EMBODIMENT OF
JOHN DEWEY'S CONCEPT OF EXPERIENCE**

A Dissertation

by

OAK HERBERT DE BERG

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

August 2011

Major Subject: Philosophy

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Approved by:

Chair of Committee,
Committee Members,

John J. McDermott
Gregory F. Pappas
Kristi Sweet
John Van Alstyne
David Erlandson
Daniel Conway

Head of Department,

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Major Subject: Philosophy

ABSTRACT

War as Aesthetic: The Philosophy of Carl von Clausewitz
as the Embodiment of John Dewey's Concept of Experience. (August 2011)

Oak Herbert De Berg, B.S., University of California at Berkeley;

B.A., University of Texas at San Antonio;

M.S., Air Force Institute of Technology

Chair of Advisory Committee: Dr. John J. McDermott

This dissertation confirms war as the zenith of aesthetic experience and demonstrates the pragmatic nature of war through explication of John Dewey's aesthetic philosophy. Likewise, the coherency of Carl von Clausewitz's philosophy parallels Dewey as it too leads to complete development, or flourishing, of the individual in a complex, ever-changing world. Von Clausewitz's sets his philosophy in the context of war, but his philosophy transcends that milieu. The timelessness of the General's philosophical concepts guarantees the appropriateness of these concepts in today's inconstant world. To exemplify this point, this paper applied von Clausewitz's concepts to the range of contemporary wars in which the demands on modern warriors are often perceived as qualitatively different from demands placed on individuals in the armies of the early 1800s. This perception is shown to lack credibility and, even though the *methods* and *technologies* of war are in continuous flux while the basic *nature* of war remains unchanged, the germane nature of the General's

philosophy to contemporary times remains unsullied and follows logically. Rather than simply asserting that the concepts of these two philosophers are apropos in the contemporary context of war, this dissertation concludes by contending that modern military thinkers employ the Clausewitzian philosophy, as synthesized by John Boyd, as a basis for fighting in today's contemporary environment. As an exemplar, the current doctrine of the United States Marine Corps is offered as a template of the philosophy of von Clausewitz and, by extension, Dewey. Modern war, once established as an archetype of the Deweyan philosophy, can be claimed as the primary illustration of the aesthetic.

DEDICATION

To Joellen de Berg

To my best friend, mentor and love of my life. Little did I realize how her statement to me in the fall of 2006 would change my life. As I lounged in my comfortable chair musing on world events Joellen looked me in the eye and said, "You are bored. You need to apply to graduate school. If you keep sitting in that chair you will waste away." I think she was correct. Thank you, dearest one.

To John J. McDermott

To a good friend and teacher *par excellence*. Not only does he care passionately for his students and their understanding of the art of living but he also serves as the example of the consummate teacher. I can think of no higher accolade. His gentle guidance and "pep talks" kept this student on track and out of the weeds. I was indeed fortunate to be able to spend time with the professor. Professor John J. McDermott is living proof of what education should be. Unfortunately, few others are able to fulfill those requirements.

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Many people made this dissertation possible. As anyone who has entered into a grand project knows, great effort is rarely rewarded if an individual tries to “go it alone.” Nothing could be more true than when applied to completing a dissertation. My dissertation committee provided excellent advice and encouragement. For their support, I wish to thank Professors Gregory Pappas, Kristi Sweet, John Van Alstyne, David Erlandson and committee chair, John J. McDermott. Grateful appreciation is given also to the Chair of the Texas A&M Department of Philosophy, Dr. Daniel Conway. Not only did Dr. Conway extend much appreciated support but also he gave me the opportunity to teach the great undergraduate students in “Aggieland.” That opportunity, teaching military ethics, led eventually to this dissertation.

As important as the faculty support, perhaps even more important, the support from my fellow graduate students kept me going when times were rough. A special group of my comrades were instrumental in seeing that “the old man” kept on track. This group, informally calling themselves “The Pondertorians,” consists of John Tyler, Kim Diaz, Dr. Paul Shockley, Olga Gerhart, Charles Carlson and, of course, Professor Scott Austin, our honorary faculty member. The Pondertorians gave, and continue to give, each other support to see one another through the “dark times.” My office mate, John Tyler, deserves yeoman’s credit for listening to all my ideas and giving cogent comments and feedback.

Without question, any success I have enjoyed at Texas A&M would not have been possible without the wonderful support of the team in the “front office.” When I needed help with any administrative tasks, everyone eagerly assisted. Never did I hear any complaint. To Katie Wright, Jamie Bosley, Michelle Wiechold, Tom Ellis, and Osmara Garcia I offer a hearty, “Thank you!” Not to be forgotten is Ms. Laura Torres. As I worked in my office very early in the morning, I often heard a knock on my door before 6:00 a.m. and Laura appeared with words of encouragement. She would say, “No problem, you can do it!” then she departed to go about her business of keeping our offices neat and tidy. Thank you Laura.

Finally, I must applaud my entire family for standing by me and helping me through the work of writing a dissertation. My wife, Joellen, has been wonderful in this endeavor. She read all my papers and offered advice on how to make them better. For all the faults that may surface in my work, only I can be held responsible. My daughter, Karen, and my grandchildren, Emily, Anna and Andrew, often bring me back to earth with statements such as, “Granddad, why are you going to school. After all, you already receive social security checks; what else do you want?” The answer is, “Not much. Perhaps, to think about life’s great mysteries, teach a bit, and stay out of my easy chair.”

To all who I have not thanked personally but have been by my side in this quest, please accept my most sincere and profound thanks.

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CHAPTER I

INTRODUCTION: ESTABLISHING A PHILOSOPHY

FOR THE NATURE OF WAR

On War, Book I, Chapter IV
General Carl von Clausewitz (1780-1831)

“OF DANGER IN WAR”

Usually before we have learnt what danger really is we form an idea of it which is rather attractive than repulsive. In the intoxication of enthusiasm, to fall upon the enemy at the charge—who cares then about bullets and men falling? The eyes shut for a moment, to throw oneself against cold death, uncertain whether we or another shall escape him, and all this close to the golden aim of victory, close to the rich fruit which ambition thirsts for—can this be difficult? It will not be difficult, and still less will it appear so. But such moments, which, however, are not the work of a single pulse-beat as is supposed, but rather like doctors' draughts, must be taken diluted and spoilt by mixture with time—such moments, we say, are but few.

Let us accompany the novice to the battlefield. As we approach, the thunder of the cannon becoming plainer and plainer is soon followed by the howling of shot, which attracts the attention of the inexperienced. Balls begin to strike the ground close to us, before and behind. We hasten to the hill where stands the General and his numerous Staff. Here the close striking of the cannon balls and the bursting of shells is so frequent that the seriousness of life makes itself visible through the youthful picture of imagination. Suddenly some one known to us falls—a shell makes its way into the crowd and causes some involuntary movements; we begin to feel that we are no longer perfectly at ease and collected, even the bravest is at least to some degree confused. Now, a step further into the battle which is raging before us like a scene in a theatre, we get to the nearest General

of Division; here ball follows ball, and the noise of our own guns increases the confusion. From the General of Division to the Brigadier. He, a man of acknowledged bravery, keeps carefully behind a rising ground, a house, or a tree—a sure sign of increasing danger. Grape rattles on the roofs of the houses and in the fields; cannon balls howl over us, and plough the air in all directions, and soon there is a frequent whistling of musket balls; a step further towards the troops, to that sturdy Infantry which for hours has maintained its firmness under this heavy fire; here the air is filled with the hissing of balls which announce their proximity by a short sharp noise as they pass within an inch of the ear, the head, or the breast.

To add to all this, compassion strikes the beating heart with pity, at the sight of the maimed and fallen. The young soldier cannot reach any of these different strata of danger, without feeling that the light of reason does not move here in the same medium, that it is not refracted in the same manner as in speculative contemplation. Indeed, he must be a very extraordinary man who, under these impressions for the first time, does not lose the power of making any instantaneous decisions. It is true that habit soon blunts such impressions; in half-an-hour we begin to be more or less indifferent to all that is going on around us: but an ordinary character never attains to complete coolness, and the natural elasticity of mind; and so we perceive that here, again, ordinary qualities will not suffice; a thing which gains truth, the wider the sphere of activity which is to be filled. Enthusiastic, stoical, natural bravery, great ambition, or also long familiarity with danger, much of all this there must be if all the effects produced in this resistant medium are not to fall far short of that which, in the student's chamber, may appear only the ordinary standard.

Danger in war belongs to its friction; a correct idea of it is necessary for truth of perception, and therefore it is brought under notice here.

*On War, Book I, Chapter IV
General Carl von Clausewitz (1780-1831)*

The narrative of world history can be conceived as a narrative of war. War defines cultures and individuals. Countless books and treatises deal with, *inter alia*, not only war's history but also war's politics, theory, economics and sociology. Little has been written on the philosophy of war's nature and what that nature entails for the commanders and those who develop into or aspire to top military leadership positions. Prussian General Carl von Clausewitz addresses this issue in his classic work, *On War (Vom Krieg)*. Conceptually, his ideas are of great interest for the military and should be of immense value for both the self-actualized individual and the philosopher. Michael Howard gives the reader a flavor for the General's philosophical sensibilities and how those understandings informed his approach to the philosophy of war.

Immanuel Kant was only one of the many Prussian writers who from 1780 onwards were arguing that if only the affairs of states were in the hands of rational, humane men, the world might enjoy perpetual peace. It was the dominant view in Prussian university and intellectual circles until the catastrophe at Jena shocked them into political awareness and set on foot the new nationalist movement that was to have such momentous consequences. ...

Nevertheless the belief was becoming widespread that war in the hands of experts could be carried out with such skill and moderation as to be virtually bloodless. Military thinkers sought for rational principles based on hard quantifiable data that might reduce the conduct of war to a branch of the natural sciences, a rational activity from which the play of chance and uncertainty had been entirely eliminated. ...

But this search for scientific certainty in military affairs was taking place at a time when thinkers concerned with other areas of human activity were beginning to question the whole idea of scientific certainty, a Newtonian universe whose objective reality was governed by forces and principles quite external to man. The idea of the British philosophers Berkeley

and Hume that man did not passively observe and absorb knowledge, but rather by the process of observation created it and moulded the world through his own consciousness, had taken deep hold in Germany. Clausewitz did not have to read the works of Kant (and there is no evidence that he did) to become familiar with these ideas which formed the basis of Kant's philosophy. ... The young Clausewitz would have encountered such ideas as these wherever he turned ... at the War College where Kant's pupil Kiesewetter was expounding Kantian philosophy, and in the intellectual circles in which he moved in Berlin. His interest in education brought him in touch with the view of such writers as Pestalozzi that education was not a matter of imparting knowledge but of using knowledge to develop the human personality towards its perfect fulfillment. His studies in aesthetic theory taught him that the artist did not succeed simply by learning and applying a given set of rules, but rather those rules had significance only as indications of what great artists had actually done, and had to be modified as the innovations and perceptions of new generations enriched the comprehension of their subject. All art, all thought (for as Clausewitz himself expressed it, all thought is art) was a *creative* activity, not an imitative or derivative one. And the same applied with particular force to the conduct of war. (13-14)

Von Clausewitz's philosophical sophistication is evident in *On War*. His philosophy, as this dissertation will contend, is a pragmatic one and can be viewed as an emergent and evolving version of John Dewey's conceptualization of the aesthetic.

Many read von Clausewitz's *magnum opus* but few fully appreciate the richness of his philosophical sensibilities. He wrote during the early part of the 19th century so, not surprisingly, his historical and political understandings reflect the conditions of the age. Consequently, some historians, political functionaries, military leaders, and philosophers claimed the ideas and concepts

espoused by the General are dated and do not apply in the modern world. In that sense, they are asserting that modernity has passed by the times of which von Clausewitz wrote and that newer concepts and philosophies are needed to deal with the exigencies of war in today's world of computers, modern jet aircraft, nuclear weapons, and world-wide, instant communication. Others, including this writer, hold a quite different view, namely, that the General's philosophy is both timely and timeless. His views are thick with lessons for the contemporary individual—whether military or civilian—and represent a sophisticated understanding of the pragmatic demands on philosophy if that philosophy is to have meaning in an unpredictable, ever-changing, precarious world. This dissertation contends von Clausewitz's philosophical understanding is not only germane in today's unstable political and military environment, but also his demand for the individual to be able to function well in the *real* world provides the template for a pragmatic philosophy later epitomized in the writings of American philosopher John Dewey. More specifically, von Clausewitz's conceptual requirements for developing the military leader and commander epitomize Dewey's philosophical understanding of the aesthetic.

The purpose of this dissertation is threefold. First, through an explication of Dewey's philosophy of the aesthetic, to show von Clausewitz's philosophy exemplifies a fully coherent view leading to complete development, or flourishing, of the individual in a complex, ever-changing world. Von Clausewitz's milieu is war, but his philosophy transcends that context. Second,

contra some military commentators who label von Clausewitz's ideas as outdated, the General's philosophical concepts are shown to be as relevant today as when he first penned them. To solidify this point, von Clausewitz's concepts will be applied to the range of contemporary wars in which the demands on modern warriors are often perceived as qualitatively different from the demands placed on the individuals in the armies of the early 1800s. The claim is then made that even though the *methods* and *technologies* of war are in continuous flux the *nature* of war remains unchanged. Finally, once demonstrated that the nature of war is temporally stable, the relevance of the von Clausewitzian and Deweyan pragmatic philosophy to contemporary war is then logically asserted.

The framework for this analysis will be built on John Dewey's philosophy of the aesthetic. Dewey's philosophy centers on the role of experience in the development of the individual. A person who fully engages in the world—the *live creature*, in Dewey's parlance—offers a lens through which to view von Clausewitz's philosophy. This especially holds insofar as that philosophy demands a certain kind of existential status for the General's model of the fully involved commander—the *military genius*.

The foundation for the framework builds, first, on an understanding and explication of Dewey's philosophy of experience and the attendant concepts central to one's complete involvement with the world. Dewey's understanding of the aesthetic demands total engagement of the individual with the

environment. The nature of this relation of man to his or her environment creates and cements a given experience as the basis for future experiences or, if the engagement is less than total, the potential for meaningful future action is mitigated or lost. The aesthetic takes on a certain form for undergoing *an* experience in which the individual is immersed in the environment and is changed by that environment. At the same time, the environment undergoes change by the actions of the individual. The process is continuous until the attainment of a stable condition, which then acts as a bedding for new experiences.

A second arc of the framework is the philosophy of von Clausewitz as that philosophy pertains to making the *military genius*. Von Clausewitz's conceptual philosophy developed the concept of *military genius* in order to winnow those aesthetic, ethical and practical qualities needed to take part in the existential milieu of the successful leader and commander. The appropriate qualitative nature of his or her experiences in combat—and the individual's participation in the aspects of war as those considerations pertain to the political objectives of the state (or the political entity responsible for hostilities)—produces the genius. A full interpretation and elucidation of the General's philosophy is drawn so as to establish the integral connection with the pragmatism of Dewey. At base, the aesthetics of Dewey and the proper experience of war as von Clausewitz conceives of those meaningful experiences are philosophies that describe the real world and the players' interactions and relations with the

environment. The connection between the two philosophies is so strong that when both are pared to the core, each can be seen as a mirror of or parallel to the other. The third aspect of the framework consequently examines common threads of each philosophy and establishes this tight connection between both philosophers. The nexus leaves little conceptual disparity between the two. Specifically, the threads examined are: (1) the aesthetic, (2) continuity, (3) uncertainty and friction; the organism, (4) theory and practice (or the abstract and the real), (5) art and science, (6) existence as a social construct, and (7) the *live creature* and the *military genius*. Both philosophers individually consider and analyze these threads. This dissertation unites them into a coherent whole. At the center of each philosophy remains a similar construct for the complete, integrated individual.

Finally, applying the Deweyan overlay to von Clausewitz's philosophy, this discourse addresses the question whether von Clausewitz's philosophical view of leadership continues to be pertinent in today's world, especially as applied to contemporary warfare. A current synthesis of the ideas of the two philosophers establishes the relevance of the Dewey/von Clausewitz view to contemporary war. This synthesis emerges as a philosophy of the nature of war developed in the late twentieth century by John Boyd. Boyd's philosophy incorporates the experiential underpinnings of both von Clausewitz and Dewey.

Like both Dewey and von Clausewitz, Boyd developed a conceptual framework for thinking as well as a creative synthesis derived from the

individual's experience with the environment. While couched in terms somewhat different from those of either Dewey or von Clausewitz, Boyd addressed most of the same issues faced by the two philosophers. Additionally, Boyd incorporated the concepts of creative synthesis—akin to Dewey's aesthetic and von Clausewitz's "inner eye"—to develop a "complete" philosophy for war and leadership. Boyd, like von Clausewitz, adamantly asserted that his philosophy is not a theory *of* war but, rather, a philosophy of how to *think about* war. Once established as an "incorporation" of von Clausewitz's and Dewey's philosophy, Boyd's concepts of war are examined relative to their pertinence to contemporary war.

To address the relevance of any philosophy to modern war, one must define the scope of war that may be considered "contemporary" or "modern." The range of wars being fought today—and those that may be conceived by the world's most creative military thinkers—covers vast conceptual ground. Ideally, to logically claim relevance for any philosophy in modern war requires that some common element inhere in *every* conceivable type of contemporary war. After examining a subset of various types of modern wars, this treatise concludes the *nature* of war in general remains unchanged from antiquity. Consequently, we can logically assert modern war does not represent a conceptual paradigm shift but, rather, recognizes that war today represents an evolutionary progression that retains its basic *nature* throughout the process of development. The applicability of the philosophies of Dewey and von Clausewitz

to that basic, unchanging nature of war remains as the final query to be answered in order to determine whether those philosophies fit today's contemporary wars.

Boyd synthesized many of the philosophical concepts of Dewey and von Clausewitz in two major works, "Destruction and Creation" and "Patterns of Conflict." After Boyd's philosophical syntheses are proven as significant incorporations of the concepts of Dewey and von Clausewitz, the link from Boyd's philosophy to a practical and applied use in the arena of actual modern warfare must be substantiated. Consequently, the claim that the philosophy of Dewey and von Clausewitz applies appropriately to modern contemporary warfare can be logically asserted.

This dissertation argues that the Deweyan/Clausewitzian philosophy, via Boyd's syntheses, constitutes the foundation for The United States Marine Corps' (USMC) warfighting philosophy in the twenty-first century. The USMC warfighting philosophy manifest in the Corps' primary doctrinal document builds upon conceptual ideas concerning the *nature* of war rather than on *rules* for how to fight. Using the USMC warfighting philosophy as an exemplar of the practical application of the *use* of philosophy in modern wars, and having shown the derivation of this pragmatic philosophy from Dewey and von Clausewitz (via Boyd), the conclusion that the philosophy of Dewey and von Clausewitz pertains to contemporary warfare becomes clear.

The explication of Dewey's aesthetic philosophy and von Clausewitz's philosophy of leadership builds upon a specific understanding of experience. Experience, properly understood and undergone, constitutes the aesthetic. The relationship of the individual with the environment requires a certain intensity in order to establish the aesthetic nature of that experience. War, perhaps the ultimate environment for these experientially rich and thick opportunities and challenges emerges as the archetype of the aesthetic. As such, contemporary wars, as in wars past and wars future, remain the embodiment of the aesthetic.

CHAPTER II

EXPERIENCE AS BEDDING FOR THE AESTHETIC

This chapter explicates John Dewey's concept of experience as the foundation for understanding the individual's place in the world. This foundation is the bedrock necessary to later build a Deweyan retrospective on the core concepts of Carl von Clausewitz. Those concepts pertain to the making of the complete military leader—or the *military genius*, as von Clausewitz refers to that leader. The goal in this explication of Dewey's experiential understanding is to set the foundation for a later demonstration that von Clausewitz's philosophical conception of war and the military genius presage Dewey's philosophy and much of philosophical pragmatism in general.

Various themes in Dewey's philosophy will come to bear on the concepts espoused by von Clausewitz; however, the common idea central to both men when considering the full moral, aesthetic and philosophical development of the individual is understanding the primacy of experience. Keeping the centrality of that understanding in the forefront, in order to make the philosophical connection between Dewey and von Clausewitz, experience as understood by each philosopher must be made fully explicit and illuminated. Once experience, as understood by both men, is appreciated and apprehended, the common core that their philosophies share can be further developed. For Dewey, experience, properly understood, is the essential and defining property of the *live creature*,

a person fully engaged in life and fulfillment. Experience is central to his ideas on education and art. The nature of experience defines the aesthetic.

This explication of the Deweyan philosophy of experience will focus on three specific aspects of his concept. These are: (1) the role of “experience as pedagogical,” (McDermott, 1981: 421) (2) experience in an ever-changing and unstable world, and (3) experience as the bedrock of the aesthetic. While Dewey has written much on the concept of experience, these three core ideas define the centrality of experience in making the person the *live creature*. To the point more directly, not only do these three aspects clearly define Dewey’s concept of experience in his philosophy and our lives but also these very same three aspects are the foundation of von Clausewitz’s understanding of experience in making the fully developed commander, or *military genius*, as he calls that commander.

The aesthetic, for Dewey, is rooted in the experience of the everyday. That experience is dependent on, or inextricably linked to, the environment and the individual’s reaction and place within that environment. The interaction of the individual and the environment is pedagogical in nature and what constitutes the individual’s “education.” Much of Dewey’s discussion of experience’s educational nature is directed at the development of the child; this discussion results in a paradigm for von Clausewitz’s mandates concerning the development of the complete officer. Additionally, Dewey understands experience—the very bedrock of our existence—to take place in a precarious

environment fraught with the unknown. We must function in a world of probabilities and uncertainties. This concept is critical to determining how well each of us can place ourselves in the objective environment in which we dwell. As well, Dewey's understanding of art and the aesthetic can be seen as a template that incorporates, and parallels, von Clausewitz's understanding of war as art. Before expositing the role of experience as the bedding for the aesthetic, an understanding of experience as pedagogical will demonstrate experience's pivotal role in the development of the fully engaged individual—the person who learns and incorporates life's lessons into a seamless and continuous thread from past experiences to future opportunities. Likewise, appreciating the fact the environment is “unknowable,” uncertain and improbable is necessary if we are to understand how meaningful experiences lead to understanding future, new and novel situations.

Experience as Pedagogical

In *Experience and Education*, Dewey describes the contrasts he sees between “traditional” education and “progressive” education. (These terms can be thought of, respectively, as “old” and “new” education.) For the purposes of this dissertation, the prescriptions Dewey offers for fixing the shortcomings of traditional education are not the major concern. Rather, his conceptions of the nature of experience as pedagogical acts as a surrogate for understanding the development of not only the fully engaged *live creature* but also the *military genius* of von Clausewitz. Dewey argues that understanding the nature of

experience allows an educator to develop a meaningful educational system based on the experiences of the student. Similarly, every individual who engages, experientially, in the appropriate way with his/her environment will gain, to the maximum extent possible, the fruits of that experience. Meaningful experience is an intensely interactive process. The pedagogic quality of an experience is directly correlated with the way that experience is sustained.

Dewey, while contrasting traditional education to the “new” progressive education, claims that the “subject-matter” of traditional education is to impart information and skills that have been determined to be of importance by others in the past. Schools have developed rules of behavior and have striven to inculcate habits that, in turn, generate actions that adhere to these rules of conduct. School organization is built on a pattern that is markedly different from other social institutions. (LW13: 5) Noting these concepts is of some import because they mark the school as an institution based on ideas rooted in the past, which leads to a system that does not foster curiosity and behavior that is not expansive or future oriented. To put this into modern colloquial parlance, the student is not prepared to “think outside the box” or to use his/her educational experiences to build effectively for a future environment. For the purposes of this dissertation, the exposition of Dewey’s experiential demands for the newer, progressive education also will allow for a clearer understanding of the experiential demands that von Clausewitz will require of the effective military commander.

Dewey describes the need for the appropriate, or meaningful, kind of experiences as being embedded in an “experiential continuum.” (LW13; 17) Within this continuum, experiences have a wide range of pedagogical values and this variability in the educative quality of the experience demands that one be able to discriminate based on the internal “value” of any and each experience. The principle of continuity of experience is what gives us a template with which to discriminate among experiences concerning the pedagogical “standing” of each. This principle, or the ability to discriminate, rests on the idea of habit. Per Dewey,

The basic characteristic of habit is that every experience enacted and undergone modifies the one who acts and undergoes, while this modification affects, whether we wish it or not, the quality of subsequent experiences. The principle of habit so understood obviously goes deeper than the ordinary conception of a habit as a more or less fixed way of doing things, although it includes the latter as one of its special cases. It covers the formulation of attitudes that are emotional and intellectual; it covers our basic sensitivities and ways of meeting and responding to all the conditions which we meet in living. From this point of view, the principle of continuity of experience means that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after.” (LW13: 18-19)

Viewed in this way, continuity assures that each experience borrows from the corpus of all previous experiences and sets a bedding for each and every new experience. Simply put, the past opens the gates to the future and the nature of the habits developed in the individual determine the likely gates to be opened as the future conditions of life present themselves.

The principle of continuity does not, in and of itself, guarantee the “goodness” of experience in determining our future actions. The fact of experiential continuity does not offer conclusivity that the pedagogical outcome of experiences will be positive. Dewey offers the example of a burglar who learns to become an expert at conducting his nefarious activities by undergoing continued experiences in the criminal arts. The educative process is continuous and occurs regardless of the moral nature of the experience itself. Nevertheless, not all experiences have the same qualitative value regarding the foundation for appreciating (that is, gaining the maximum from) future experiences. Experiences, to effectively form the bedding for the future, must be allowed to ferment and excite those tentacles that can grasp the possibilities embedded in any new or novel experiences.

As indicated in the above quote from Dewey, a *process* denotes what actions are requisite for an individual to gain the most from any experience. The process requires continual engagement from the experiencer and this engagement takes the form of constant interplay of the individual’s actions and the effects of the environment of that experience. Dewey tells us this interplay is the reciprocal relation of “acts” and “undergoing.” While the terminology changes somewhat in his later writings, this process can be viewed a constant cycle of the individual’s actions as those actions affect the environment of the experience and the “feedback” of the environment on the individual. This feedback sets a new environment that requires new engagement, or acts, by the

person undergoing the experience that, once again, changes the environment, thus the cycle goes on.

The cycle only comes to an end when the acts and the undergoing reach accommodation in a state of near stasis. The experience, however, is not “dead” at this point. The experience becomes part of the individual’s storehouse of all previous experiences and adds to the foundation upon which all future experiences will be undergone. Viewed this way, we can suggest that for an experience to reach the point of completion, or consummation, that the experience must be coherent with the body of experiences already undergone. If a new experience is had which appears to conflict with previous experiences then those older experiences must be revisited, or “reopened,” if the entire body of an individual’s experiences are to lead to bedding for appropriate understanding of future experiences. The pedagogical nature of one’s experiences begins to become clear if thusly understood.

Dewey established that the pedagogical nature of experience does not, in itself, determine whether the educational quality derived will be positive or negative. That is not to say, however, that the principle of continuity cannot be used “as a criterion by which to discriminate between experiences which are educative and those which are mis-educative.” (LW13: 20) Each experience, as noted earlier, is a constant interplay of the individual with the environment. Consequently, every experience—either consciously or subconsciously—affects the attitudes of the experiencer toward all future experiences. These attitudes

are foundational in determining the quality of all later experiences and lead to setting certain preferences in the individual that make actions for any given end either easier or more difficult to attain. Contrasting the idea of experience as a *process* with the classical interpretations of experience as simply the reception of sense data from the environment, Dewey offers, “Moreover, every experience influences in some degree the *objective conditions* under which further experiences are had.” (LW13: 20, emphasis added) This means that the environment is not an objective reality in which the individual operates but, rather, the environment is determined and interpreted by the prior experiences of the individual.

For example, a child who learns to speak has a new facility and new desire. But he has also widened the external conditions of subsequent learning. When he learns to read, he similarly opens up a new environment. If a person decides to become a teacher, lawyer, physician, or stockbroker, when he executes his intention he thereby necessarily determines to some extent the environment in which he will act in the future. He has rendered himself more sensitive and responsive to certain conditions, and relatively immune to those things about him that would have been stimuli if he had made another choice. (LW13: 20)

Not only do major life choices—to become a professor or a military officer—and actions—learning to read or play an instrument—affect the environment but so too do the entire stock of previous experience undergone in one’s life. Previous experience need not be specific to the current experience at hand but may still be critical to the way the present experience is undergone. For example, we commonly hear that the value of sport is not necessarily that one become expert

in his or her chosen sport. Rather, the claim is made that the value gleaned from participation in athletic endeavor is in the development of leadership abilities, ability to work as a group or team, and the enhancement of character. Whether or not this is actually the case may be the cause for some debate but, nonetheless, little doubt exists participation in an activity such as sport enables one to view the ever changing character of one's surroundings differently than if one had spent his or her entire life in the confines of a library simply reading the rules of the game. Being *in* the world requires active participation and that participation does, indeed, shape the environment in which the individual acts. As Dewey describes, "But, while the principle of continuity applies in some way in every case, the quality of the present experience influences the *way* in which the principle applies." (LW13: 20)

Returning to the problem of whether or not an experience is educative or mis-educative, the principle of continuity is always determinative in that all experience determines the nature of how the environment interacts with the individual in future experience. For example, war consists in the physical sense in a series of combat actions. Two individuals who experience combat in the same military campaigns interact with the environment in distinctly different manners. Assuming no previous combat experience for these two individuals, the initial experience for each may very well be drastically disparate because of how he or she reacts with the dangerous and rapidly changing environment in which he or she is thrust. One individual could find the entire milieu exciting

and filled with opportunity while the other may find nothing but danger and overriding fear. The first individual may find the experience as a chance for personal growth and use what is learned as a perch from which to view all future combat. The second individual might find the entire environment so limiting that permanent damage is done—for example, he or she might become victim of war related tensions and anxieties as post-traumatic stress syndrome—wherein the ability to use previous experiences to positively affect future experience is lost. This example intends to show that any experience in itself is not determinative of the educative or mis-educative value of that experience. Rather, the value of an experience is inherent in *how* the individual and the environment interact with one another or, to use Dewey's descriptors, how the *action* and the *undergoing* participate and change one another in the experience. Regardless of whether the change in the individual can be viewed as positive or negative, the principle of continuity remains operative in the sense that new experiences, as incorporated into the individual's entire set of life's prior experiences, are dispositive of how future experiences will be engaged.

Dewey sums up this concept as follows:

...There is no paradox in the fact that the principle of continuity of experience may operate so as to leave a person arrested on a low plane of development, in a way which limits later capacity for growth. ... On the other hand, if an experience arouses curiosity, strengthens initiative, and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future, continuity works in a different way. Every experience is a moving force. *Its value can*

be judged only on the ground of what it moves toward and into.
(LW13: 20-21, emphasis added)

Dewey, while discussing the role of the teacher in relation to the pupil, develops the concept of maturity and how experience relates to the process of educating the young. His concept is important because within this relation there are important parallels with what will later be shown to be central to von Clausewitz's claim regarding the role of experience in training an army. The critical idea is that the educator, be she a teacher or a coach or the general leading an army, is in a position of understanding the experience of the young under her tutelage in a way that the young actually undergoing the experience might not be able to appreciate. If this is the case, then Dewey believes that the duty of the educator must see in which way the experience is driving the pupil (or the athlete or the young officer). This mature understanding becomes critical in organizing the experiences of the neophyte in order to allow the maximum gain from insights gained through a life of experiences by the educator, coach, or commander. Dewey maintains that any educator who fails to realize this duty to direct the experiences of those who have not yet had the requisite experiences in life is an act of disloyalty in two ways. "The educator is false to the understanding that he should have obtained from his own past experience. *He is also unfaithful to the fact that all human experience is ultimately social: that it involves contact and communication.*" (LW13: 21, emphasis added) In other words, those who are responsible for others with less

experience have a duty to guide their charges based on their understanding of their own experiences. Of significant import in Dewey's demand for using experience as pedagogical bedding is the concept of the social nature of experience. Not only is this social aspect critical for understanding Dewey's concept of experience but also von Clausewitz too will claim that war itself is a social act. This social nature of experience is one of several key ideas that inextricably tie the two philosophers together.

Dewey explains the social nature of experience by again claiming that experience is not simply a matter of sense data impinging on the individual that then results in a certain internal state of affairs within the mind of the one having the experience. This view of experience, perhaps one that John Locke or David Hume might espouse, lacks the interactive nature of experience that Dewey demands if an experience is to have meaning for the individual. Since every genuine experience requires and intimate interaction between individual and the objective environment, that interaction must in some way change both the individual and the objective environment. Conceptually, Dewey is making a claim somewhat similar Heisenberg's Uncertainty Principle. The simple act of measurement adds uncertainty to that measurement; likewise, the fact that experience demands interaction with an objective environment will change the conditions of that environment. Experience, therefore, demands more than an internal state of mind; experience requires both objective (external) environment and internal conditions in the experiencer. Dewey calls the linkage

of the internal with the external a *situation*. “The statement that individuals live in a world means, in the concrete, that they live in a series of situations. And when it is said that they live *in* these situations ... (i)t means, once more, that interaction is going on between an individual and objects and other persons. The conceptions of *situation* and *interaction* are inseparable from each other.” (LW13: 25)

Situations, conceptually, are at the heart of the idea of experience as a social interaction. If genuine and meaningful experience puts the individual into the objective environment of the outside world, then that environment is not only occupied by others but is a product of all the experiences of the community, be that community local or world-wide. Dewey explains the social nature of experience thus:

An experience is always what it is because a transaction taking place between and individual and what, at the time, constitutes his environment, whether the latter consists of persons with whom he is talking about some topic or event, the subject talked about being also a part of the situation; of the toys with which he is playing; the book he is reading (in which his envioning conditions at the time may be England or ancient Greece or an imaginary region); or the materials of an experiment he is performing. The environment, in other words, is whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had. Even when a person builds a castle in the air he is interacting with objects which he constructs in his fancy. (LW13: 25)

This transactional nature of experience, or the interaction of the internal with the external, places each individual *in* the world in an active sense. Being in the

world puts each individual, perforce, in the objective environment not only by him or herself but in the objective environment of all other individuals engaged in the act of experiencing. Since that environment is instrumental in the interaction endemic to all meaningful experience, all genuine and meaningful experience takes place in a social environment. On a gross scale, this is clearly evident to the most casual observer. Our environment is incontrovertibly the product of the experiences of others within our social milieu. Roads, airports, symphonies, books, pets, the Internet, corn on the cob, chitchat with friends, the Super Bowl, are all social constructs. One can hardly imagine any experience without a social interaction of some sort. A non-social experience would require us to live as hermits in the wilderness but, even then, our social world would exist in light of our existence within nature, the flora and the fauna.

The social nature of experience allows the educator to appropriately guide those entrusted to his or her care. This idea applies as well to von Clausewitz's demands for training an army, but we should not leave the discussion of Dewey's concept of the social nature of experience without some understanding of how he understands the social role of the educator. Since continuity and interaction are conceptually intertwined in all situations within experience, what the individual has gained from any given experience lays the foundation for interpreting and undergoing future experience. Hence, when an individual faces any new situation, he or she comes with a predetermined foundation for engaging the new experience. Dewey says, "The individual, who enters as a

factor into it (the new situation), is what he is at a given time.” (LW13: 26) If this is the case, the educator must accept the individual as he or she is and cannot legitimately expect to have the student react to new situations in any way that is inconsistent with all of his or her prior experiences. What the educator can do is to regulate, as much as possible, the objective environment of the situation to foster new and desired experiences in the subject so the body of experiences of the student now incorporates the present experience in such a way as to build a fresh set of experiences which better enable the individual to cope with future situations which may arise. Per Dewey,

As has already been noted, the phrase “objective conditions” covers a wide range. It includes what is done by the educator and the way in which it is done, not only the words spoken but also the tone of voice in which they are spoken. It includes equipment, books, apparatus, toys, games played. It includes the materials with which an individual interacts, and, most important of all, the total *social* set-up of the situations in which a person is engaged. (LW13: 26)

While Dewey is addressing his remarks to the construct of an academic education for elementary and secondary school children, the extension to adult training is evident. Regardless of age or maturity of the learner, the social aspect of all life’s experiences is central. Since, as Dewey demonstrated, the objective environment is “objective” only insofar as that environment has been determined by social forces, then the pedagogic power of experience, at least to some extent, results from society and the social imprint on the environment. The educator, because of his or her ability to affect the social impact on the

environment, has a duty and responsibility for selecting the objective conditions that are most appropriate to allow the learner to benefit from all and any new situation. This allows for the effective operation of the principle of continuity. As Dewey describes this responsibility of the educator to set the conditions of the objective environment,

It is no reflection upon the nutritive quality of beefsteak that it is not fed to infants. It is not an invidious reflection upon trigonometry that we do not teach it in the first or fifth grade of school. It is not the subject *per se* that is educative or that is conducive to growth. There is no subject that is in and of itself, or without regard to the stage of growth attained by the learner, such that inherent educational value can be attributed to it. Failure to take into account adaptation to the needs and capacities of individuals was the source of the idea that certain subjects and certain methods are intrinsically cultural or intrinsically good for mental discipline. There is no such thing as educational value in the abstract. (LW13: 27)

Simply put, for experiences to be meaningful and have pedagogic value, situations must be undergone in an environment appropriate for the desired education to occur. More often than not, the educator, be he or she a teacher, coach or general, sets that environment.

Dewey is quick to point out that in his or her proper role the educator does not impose on the student from the outside. External control is not the goal of an educational process but, rather, the educator must use his or her experience to gauge the tendencies and habits of the learner so as to set an atmosphere that is “conducive to growth.” Dewey claims this is a very difficult task for the educator because ultimately the conditions for learning should be based on the

experiences of the learner. Hence, if the teacher or coach or general is to properly set the conditions for learning, then he or she must understand, experientially, what is happening in the minds of the learner. This can best be done effectively if the educator has actually had the appropriate meaningful experiences personally. As will be shown, failure to appreciate the need for having a base of appropriate meaningful experiences, can lead to a reliance on theory rather than on an understanding the lessons of lived experience. For von Clausewitz, this failure of appreciation for experience can only lead to disaster in war.

Dewey notes that a common pedagogical fallacy is to assume that a person learns only that which he is studying at any given time. More important than any subject matter is the concept of "collateral learning." This collateral learning is not about subject matter but, rather, is a type of learning in which new attitudes are developed. Most important, these new attitudes, be they likes or dislikes regarding the subject, lead to how new situations are experienced. These attitudes are what determine the pedagogic quality of future experiences and are endemic to how any given experience will fit within the continuum of all experiences. For Dewey, the most important of these collateral attitudes is the inculcation of the desire to go on learning throughout all future experiences, indeed, throughout life. The pedagogic quality of experience is determined by the way in which the individual interacts with his or her environment. If the desire to learn is strong, the interaction of the individual with the environment

will be more intense than if no interest exists. A strong desire to “get the most” out of an experience intensifies the interaction and continues the cycle of action and response for a longer time than if little interest is extant in the individual. Dewey puts this succinctly, “What avail is it to win prescribed amounts of information about geography and history, to win the ability to read and write, if in the process the individual loses his own soul: loses his appreciation of things worthwhile, of the values to which these things are relative; if he loses desire to apply what he has learned and, above all, loses the ability to extract meaning from his future experiences as they occur?” (LW13: 29) Today’s educational emphasis on testing our school children so that they can “regurgitate” a requisite series of facts or perform certain rote procedures is precisely what Dewey argues mitigates against meaningful collateral learning.

From a pedagogical perspective, the purpose is not to amass knowledge of a certain type but to develop attitudes within the individual that foster the ability to fully engage and realize the potentialities of *future* experiences. Meaningful learning is the ability to glean the maximum available from the *present* experience one is undergoing in order to be better able to gain all that is available in future situations. Developing this ability and the proper attitudes toward understanding the nature of experience will, as will be shown, a critical component of von Clausewitz’s concept of training an army. Of course, Dewey is not directing his conceptual schema toward any specific area of knowledge but, rather, on how to structure the appropriate learning environment for the

progressive “new” schools he feels to be mandatory if students are to gain what is needed from the “educational experience.” Appropriate understanding of the interactive nature of having a meaningful experience is the fodder for extracting the most from the potentiality of all further experiences. Dewey observes,

But the relation of the present and the future is not an *Either-Or* affair. The present affects the future anyway. The persons who should have some idea of the connection between the two are those who have achieved maturity. Accordingly, upon them devolves the responsibility for instituting the conditions for the kind of present experience, which has a favorable effect upon the future. Education as growth or maturity should be an ever-present process. (LW13: 30)

Dewey’s general pedagogic construct transcends the structured learning milieu, which not only existed in his time but also still exists, in the main, today. His radical departure from the traditional modes of “teaching” may not seem as radical as many suppose when one realizes that, in a nascent sense, his theories were presaged almost a century earlier by an obscure Prussian staff officer.

Experience and Nature

Dewey, in *Experience and Nature*, introduces another important aspect of experience that is not specifically directed at the pedagogical nature of an individual’s interaction with the environment but, rather, deals with how the interaction takes place in an ever changing, dynamic context. In an introduction to the second chapter, “Existence as Precarious and Stable,” John J. McDermott put the idea of the unknown and unexpected in experience in perspective.

In this second chapter of *Experience an Nature*, Dewey fleshes out his notion of ordinary experience by virtue of his

concentration on the 'precarious.' He states that "man finds himself living in an aleatory world; his existence involves, to put it baldly, a gamble. The world is a scene of risk; it is uncertain, unstable, uncannily unstable." Dewey then contends that with few exceptions, traditional philosophy has been unable or unwilling to deal adequately with the precarious, the ambiguous, or the contingent aspects of experience, preferring to dismiss them or buy them off by overarching classificatory systems. But however clever the dialectic or imposing the system, philosophy must never forget that "incompleteness and precariousness is a trait that must be given footing of the same rank as the finished and the fixed." (1981: 277)

The significance of the aleatory nature of the environment requires a thorough understanding if Dewey's concept of experience is to be fully appreciated. As cited earlier, the unpredictable and apparent randomness of nature will be a critical component of von Clausewitz's demand for coping with the situations and experiences of war. Hence, if the nexus between the two philosophers is to become clear, Dewey's claim that our existential status depends on a "gamble" with nature must be fully explored.

Dewey states, "A feature of existence which is emphasized by cultural phenomena is the precarious and the perilous. ... The sacred and the accursed are potentialities of the same situation; and there is no category of things which has not embodied the sacred and the accursed; persons, words, places, times, directions in space, stones, winds, animals, stars." (LW1: 42) From this encompassing sphere of the uncertain and the unstable come all of our beliefs, understandings, morals, and dispositions. Yet, as Dewey so aptly discerns, come the "potentialities" and possibilities for experiences to make our existence

either better, or more ill, suited for partaking of the offerings of future experiences. “While unknown consequences flowing from the past dog the present, the future is even more unknown and perilous; the present by that fact is ominous. If unknown forces that decide future destiny can be placated, the man who will not study the methods of securing their favor is incredibly flippant.” (LW1: 44) While Dewey’s statement is directed at the creation of gods by man, from the need to assuage the fear of living in a continually perilous and unexplainable environment, he extends this thought by noting that the environment in which all people live is shaped by their predecessors in that culture or society. If an individual is to function in any culturally formed environment then that individual must understand the social nature of the environment. Only with this appropriate understanding can the vagaries of present experience be mined to the benefit of the individual who must cope with yet further and, perhaps, new and novel experiences.

Philosophically, Dewey maintains, the importance of the precarious, the unexpected, and the unknown has been relegated to a metaphysically inferior position in a misguided attempt at wisdom. The assertion is that, with some few exceptions—he cites Heraclitus and Henri Bergson and, perhaps should have, acknowledged William James—philosophy has historically been rooted in a search for an absolute and unchanging reality. The fear and superstitions of the ancients have not been assuaged within modern “civilization” but, rather, the

claim is that contemporary men and women merely “substituted sophistication for superstition.” Dewey explains,

But the sophistication is often as irrational and as much at the mercy of words as the superstition it replaces. Our magical safeguard against the uncertain character of the world is to deny the existence of chance, to mumble universal and necessary law, the ubiquity of cause and effect, the uniformity of nature, universal progress, and the inherent rationality of the universe. These magic formulae borrow their potency from conditions that are not magical. Through science we have secured a degree of power of prediction and of control; through tools, machinery and an accompanying technique we have made the world more comfortable to our needs, a more secure abode. We have heaped up riches and means of comfort between ourselves and the risks of the world. We have professionalized amusement as an agency of escape and forgetfulness. *But when all is said and done, the fundamentally hazardous character of our world is not seriously modified, much less eliminated.* (LW1: 45, emphasis added)

That we believe the immutable and the stable not only compose the preferred condition for mankind but also, in fact, constitutes the *actual* condition in which we live may be regarded as one of man’s major misconceptions of the world. We are awash in “isms,” which attempt to negate, minimize or ignore the precarious nature of our objective environment. These “isms” allow us to pretend the uncertainties of the world are not real or that we can ignore these uncertainties with some impunity. Dewey cites the problem of evil as a prime example of this concept. Goods are taken to be the norm and evils fall outside that norm as things that do not fit within “the *real* order of things.” (LW1: 45) We take the goods that we receive as evidence of rewards for something well deserved or earned. The evils are considered to be accidents. While acknowledgement of

evils with goods gives rise to philosophical musings, the fact remains that the uncertain, unstable, unforeseeable, precarious and ever mutable nature of the environment is the *required* boundary in which *all* experience must take place. Dewey clearly saw this chaotic environment as a necessity for experience. Also, this concept is crucial for von Clausewitz and is the fulcrum upon which his concept of experience is also balanced.

The very fact of this unstable world is, Dewey claims, the fundamental basis of philosophy. After citing a litany of apparently contradictory philosophies—for example, spiritualism/materialism, absolutism/relativistic phenomenism, transcendentalism/positivism, rationalism/sensationalism, idealism/realism, subjectivism/objectivism—he claims the basis of all philosophies are rooted in a common premise. All of these philosophies, as disparate as they might seem on the surface, are “recipes for denying to the universe the character of contingency which it possesses so integrally that its denial leaves the reflecting mind without a clue, and puts subsequent philosophising at the mercy of temperament, interest and local surroundings.” (LW1: 46) If this is so, then humans, it would seem, are bent on making the stable prevail over the unstable. This stability allows the world to become predictable and secure. Even those who—Dewey mentions Hegel and Bergson—have a “philosophy of flux” end up by making flux a eulogistic predicate. However, viewed this way, Dewey claims change (or flux) “is not, as it is in experience, a call to effort, a challenge to investigation, a potential doom of disaster and death.” (LW1: 49-50) The

attempt to make the uncertain into something stable and assured is to commit, according to Dewey, *the philosophic fallacy*. “It supplies the formula of the technique by which thinkers have relegated the uncertain and unfinished into an invidious state of unreal being, while they have systematically exalted the assured and complete to the rank of true Being.” (LW1: 51)

Gregory F. Pappas explains the fallacy more fully,

Dewey thought that the general failure to be empirical in philosophy amounted to a failure to acknowledge primary experience as the non-cognitive context of philosophical inquiry. Philosophers often denied the practical experiential context of their own investigations and took the products of their inquiries to replace experience as it is lived. Philosophers have not only failed to let their own inquiries be guided by and returned to context but they have also defended notions of thinking as devoid of all context. Hence, Dewey concludes that “the most pervasive fallacy of philosophic thinking goes back to neglect of context” This general failure was so common in philosophy that he calls it “the philosophical fallacy”

The philosophical fallacy became Dewey’s main tool of criticism in different areas of philosophy, and he discovered many different ways that philosophers made the same fundamental mistake. But he never clearly set forth in a systematic way the various formulations and versions of the fallacy. I will sort out four different versions of the fallacy and show how they generate the truncated view of experience inherited by non-empirical ethics. (26)

Most certainly, von Clausewitz did not fall prey to the philosophical fallacy. For him, meaningfully undergone experience requires empirical exposure to events in war or intense, realistic training. A “truncated view of experience” could only be the inevitable result of understanding of war gained by theory or study.

Our existential nature requires knowledge of existence and, philosophically, this requires philosophers to have a “pretention” to knowledge. “Hence they transmute the imaginative perception of the stably good into a definition and description of true reality in contrast with a lower and specious existence, which, being precarious and incomplete, alone involves us in the necessity of choice and active struggle.” (LW1: 51) This is the connection with the requirement of meaningful experience, namely, that all meaningful experience is a continuing reciprocal interaction of the individual with the objective environment. If this is true of experience, then no interaction can occur with an immutable, stable environment. Such an environment is not capable of change and the requisite interplay between the experiencer and his or her environment becomes moot. The attempt to create a universal reality results from the need to remove the uncertain and unstable from actual existence. Dewey depicts this as an attempt to remove the “very traits which generate philosophic reflection and which give point and bearing to its conclusions.” (LW1: 51) Further,

In briefest formula, “reality” becomes what we wish existence to be, after we have analyzed its defects and decided upon what would remove them, “reality” is what existence would be if our reasonably justified preferences were so completely established in nature as to exhaust and define its entire being and thereby render search and struggle unnecessary. What is left over, (and since trouble, struggle, conflict, and error still empirically exist, something *is* left over) being excluded by definition from full reality is assigned to a grade or order of being which is asserted to be metaphysically inferior; an order variously called appearance, illusion, mortal mind, or the merely empirical, against what really and truly is. Then the problem of metaphysics alters:

instead of being a detection and description of the generic traits of existence, it becomes an endeavor to adjust or reconcile to each other two separate realms of being. Empirically we have what we started with: the mixture of the precarious and problematic with the assured and complete. But a classificatory device, based on desire and elaborated in reflective imagination, has been introduced by which the two traits are torn apart, one of them being labeled reality and the other appearance. The genuinely moral problem of mitigating and regulating the troublesome factor by active employment of the stable factor drops out of sight. The dialectic problem of logical reconciliation of two notions has taken place. (LW1: 51-52)

Attempts to reconcile the two separate realms of being insinuate a moral sense that the stable and immutable occupies a superior position to the precarious and mutable. This amounts to a denial of the value of the uncertain and problematic. However, both existentially and experientially, the unstable is what gives each meaning. The denial most frequently takes the form of a bifurcation into a supposed “true” realm of being—stable and immutable—and the lower and less “real” realm of illusion and insignificance occupied by the uncertain and problematic. Dewey says this construct does not recognize the actual environment, or nature, of the world. That nature is a combination of both stability and instability and “Its plaintive recognition of our experience as finite and temporal, as full of error, conflict and contradiction, is an acknowledgment of the precarious uncertainty of the objects and connections that constitute nature as it emerges in history.” (LW1: 55) He continues to explain that the human desire for order and harmony lead us to value the stable and to try to create stability from the discordant character of nature. We

humans appear to do this quite well but in so doing we create an “absolute experience” that is accepted as “perfect and good” and, ultimately, as the only real component of our experience. “The experienced occurrences, which give poignancy and pertinency to the longing for a better world, the experimental endeavors and plans which make possible actual betterments within the objects of actual experience, are thus swept out of real Being into a limbo of appearances.” (LW1: 56)

To gain the most from experience, that is to have an actual *meaningful* experience, both the stable and the unstable must be viewed as the unity making the environment.

The union of the hazardous and the stable, of the incomplete and the recurrent, is the condition of all experienced satisfaction as truly as of our predicaments and problems. While it is the source of ignorance, error and failure of expectation, it is the source of delight which fulfillment brings. For if there were nothing in the way, if there were no deviations and resistances, fulfillment would be at once, and in so being would fulfill nothing, but merely be. It would not be in connection with desire or satisfaction. Moreover when a fulfillment comes and is pronounced good, it is *judged* good, distinguished and asserted, simply because it is in jeopardy, because it occurs amid indifferent and divergent things. Because of this mixture of the regular and that which cuts across stability, a good object once experienced acquires an ideal quality and attracts demand and effort to itself. A particular ideal may be an illusion, but having ideals is no illusion. It embodies features of existence. (LW1: 57)

The very fact the environment is unstable is what gives existential meaning to all experience. Were the world simply stable, mankind would not be permitted ideals. The world would simply exist as an unchanging

environment and nature would simply exist without offering the chance for interaction. Looking back to the discussion of experience as pedagogical, education would simply revert to learning whatever “facts” of nature are to be had. The growth of self through interaction with a changing environment would be precluded and the opportunity to have ideals thwarted. The jeopardy required to pronounce something good would not exist. The demand and effort needed to make an experience approach the ideal needed for self-growth could not occur. Dewey goes farther and says the ideal nature of experience only occurs retrospectively as brought forth in “prior conflict” and prospectively as they contrast with the forces that work for their destruction. (LW1: 57-58) Here we see a new explanation for the earlier declaration of experience as a continuum; the earlier experiences—taken as a body—constitute the ability and the effectiveness with which future experiences are undergone. This continuity could not exist in a solely stable world. While noting that nature as precarious is the font of all trouble, the shaky, parlous, and unsettled universe is also the sufficient condition of a meaningful experience. Only these experiences can give individuals any real existential status. If the universe were completely stable, we would simply *be*. Growth and ideals could not flourish.

A final point that must be considered in Dewey’s concept of experience in nature is the place and role of thought and reflection in the experiential scheme. Reflection, as will be demonstrated later, is a critical aspect of von

Clausewitz's philosophy and, consequently, understanding Dewey's conception is required if the eventual nexus between the two philosophers is to be appreciated. Continuing the dichotomy between the stable and the precarious, Dewey contrasts the grouping of "unity, permanence, (or 'the eternal'), completeness and rational thought" with "multiplicity, change and the temporal, the partial, defective, sense and desire." (LW1: 60) While noting this as a philosophically violent separation, he extracts the concept of thought and unity from the dichotomy. Reflection, he notes, arises from the uncertain and problematic—*not* from the stable and secure. The aim of reflection is to gain clarity and insight from the miasma of chance, uncertainty, and chaos. To pull order from disorder one must not see reflection as an aim or ideal but, rather, as something practically attainable through effort and mental application. Thought and reflection might garner unity from disorganization but the unity does not come without the "work" of interaction with the objective environment. Reflective inquiry, or the rational, for Dewey, is the attempt to work for this unity out of the uncertain and problematic presented in each experience. In his introduction to *Essays in Experimental Logic*, Dewey encapsulates this view; "Every reflective knowledge, in other words, has a specific task which is set by a concrete and empirical situation, so that it can perform that task only by detecting and remaining faithful to the conditions in the situation in which the difficulty arises, while its purpose is a reorganization of its factors in order to get

unity.” (MW10; 327) Reflection is what gives us what we *understand* from experience.

When the goal of an organized totality is reached, relations between the disparate elements of the objective environment are made to cohere not only among themselves but also with the relations garnered in previous experience. The object of organizing these disparate elements is to set a stage for the antecedent as a starting point in future experiences. Thought, or the attempt at organizing the disparate, necessitates a reflective mode which involves “doubt, inquiry and hypothesis, because it sets out from a subject-matter conditioned by sense, a fact which proves that thought, intellect, is not pure in man, but restricted by an animal organism that is but one part linked with other parts, of nature.” (LW1: 60)

At base, humans strive to obtain “meaning” from the environment—extract an organized world from a world of turmoil and tumult. This attempt requires reflection, which in turn is only possible because of the uncertainty and the unpredictable in each interaction with nature. These interactions comprise the totality of our experiences, which, in turn, is the starting point of all future experience. This continuity, discussed in detail earlier, necessitates the problematic and unstable if an individual is to grow and obtain the *good* from an experience. The issues of life and philosophy are inextricably linked to the relations we can make between the guaranteed

and the unknown—the stable and the unstable. Dewey explains this relation and the application to the existential—the issue of *living*.

(L)ove of wisdom which is philosophy, is concerned with choice and administration of their proportioned union. Structure and process, substance and accident, matter and energy, permanence and flux, one and many, continuity and discreteness, tradition and innovation, rational will and impelling desires, proof and discovery, the actual and the possible, are names given to various phases of their conjunction, and the issue of living depends upon the art with which these things are adjusted to each other. (LW1: 67)

Art as Experience

The aesthetic is a function of experience and the way experience is undergone. Modern man has removed the aesthetic *experience* from the act of living and instead made the aesthetic a *quality* that inheres in objects of art, music, literature, and the like. This notion is wrong-headed, according to Dewey, and he attempts to recover the aesthetic as an experiential continuum that is part and parcel of the very act of living. He begins this recovery with an explication of the aesthetic as experienced through art. This recovery, when complete, should make manifest the role of the aesthetic in the everyday and re-establish what is meant by being alive in the world.

Art, for Dewey, is a natural phenomenon that demand's participation from the viewer as well as the artist. When cut off from the human endeavor of undergoing and achieving, man relegates what is then still referred to as "art" to the realm of theory—fit only for the critic. To understand art, one needs to understand ordinary experience. The aesthetic, as Dewey says, must begin "in

the raw” (AE: 3) or in the world of the experiences of the everyday. Individuals are only carried forward, he says citing Coleridge, by “the journey itself.” (AE: 4) Early man, according to Dewey, experienced the aesthetic in all activities necessary to live. That is, all experience led to an appreciation of the factors of the everyday, which could ensure survival. Each experience undergone, if properly understood, gave footing to the ability to understand new experiences as they arose in novel and challenging conditions. Being attuned to the signals and nuances of nature was requisite if one was to survive. Life, effectively, was lived in the aesthetic mode; life not only became art, life *was* art. For most, in the “modern” world, this is no longer the case as humanity has become removed from the demands of survival and mankind lives in relative ease in “civilized” societies. For much of today’s art, most individuals are removed from the participatory function of appreciation and now are dependent on outside, extraneous conditions for supposed aesthetic experiences.

The *social* purpose of art has thus lost its meaning for humankind and modern man becomes dependent on theory. Theory (re art) separates the individual from “real” experience. The problem has become one of determining how to reclaim the continuity necessary to truly have meaningful experiences and recapture the aesthetic in the very act of living. Art has been removed from the environment of survival—the realm of living—to be put in a category apart from life. Museums are built and art can only be viewed from afar in certain lighting conditions and from certain angles. Concert halls are constructed and

the “great symphonies” are admired in solitude and with hushed silence. This amounts to erecting walls around the work at hand and militates against having a full and, perhaps, intense experience with the work. Art has become inaccessible and, for many, art is replaced by what is accessible. What is substituted and often taken to be art are the sensational and the vulgar. While Dewey cites certain comic strips, jazz and the movies as examples of this lessening of art in its various forms, perhaps today he would offer television reality shows and the tell-all newspaper exploits of entertainment celebrities. Dewey did acknowledge the aesthetic, and he even enjoyed and appreciated, in the comics, jazz and movies. The “lessening” of art as a response to mass culture, however, attenuates the opportunities for, and the richness of, true aesthetic experience.

The point is not necessarily that museums and concert halls *per se* are the cause of this diminution of art as an aesthetic endeavor but, rather, that art itself has been removed from the ordinary “objects and scenes” of everyday living. Critics, and their theories of art, are now needed to tell the masses what is “good” and what is “bad.” “The times when select and distinguished objects are closely connected with the products of usual vocations are the times when appreciation of the former is most rife and most keen. When, because of their remoteness, the objects acknowledged by the cultivated to be works of fine art seem anemic to the mass of people, esthetic hunger is likely to seek the cheap and the vulgar.” (AE: 4) When theory replaces the aesthetic, a gulf is created

between art and the ordinary. Separation makes aesthetic appreciation of the ordinary difficult. "Confusion of values enters to accentuate the separation. Adventitious matters, like the pleasure of collecting, of exhibiting, of ownership and display, simulate esthetic values. Criticism is affected." (AE: 8)

Dewey's purpose is not to argue what constitutes the "good" or "bad" in art or to bemoan the separation that has taken place. Rather, he wants to make clear that isolating art from the everyday—putting the aesthetic in a position of remoteness—is not a manifestation of any particular subject matter or form. Instead, he wants to make clear that the aesthetic is lost because we have become disconnected from certain modes and methods of *experiencing*. What Dewey requires for the aesthetic experience is that the experience be part of the very act of living. The remoteness he decries is due to the transient nature of the experience that is had when the "art" is removed from the environment of the everyday. Theory assumes the aesthetic is endemic in the nature of the work; Michelangelo's *David* or Beethoven's *Pastoral Symphony* is aesthetic in itself. Dewey claims this is not, and cannot be, the case. Only the interaction of the creator with the work or the interaction of the one experiencing the work with the work can create the aesthetic. *Experience* with the object creates the aesthetic. "If artistic and esthetic quality is implicit in every normal experience," Dewey asks, "how shall we explain how and why it so generally fails to become explicit? Why is it to multitudes art seems to be an importation from a foreign country and the esthetic to be a synonym for something artificial?" (AE: 11) The

answer to this question will help in understanding why there are so few of what von Clausewitz will call the *military genius*.

“The nature of experience is determined by the essential conditions of life.” (AE: 12) Experience is not an event that happens *in* life but, rather, experiences properly understood are inextricably bound to each individual because of the individual’s interaction *with* life. Our destiny is bound up in our interchanges with the environment. This interchange occurs *inter alia* in an ever-changing milieu of uncertainty, probabilistic shifts, resistance to effort, and quality of previous germane experiences. When the individual can discern some sort of order from this quixotic environment, he or she is beginning to see the aesthetic in the experience. The experience does not occur in isolation but is dependent on all previous experiences as well as the environment. “The career and destiny of a living being are bound up with interchanges with its environment, not externally but in the most intimate way.” (AE: 12)

Life is a series of phases in which the organism tries to reach some accommodation with the environment either through sustained effort or some “happy chance.” (AE: 12) To encapsulate Dewey’s concept, if the life of the organism is to be enhanced, then the interaction with the environment must not return the being to its original state but must leave it in a new and enriched state. This is only possible if the interaction has been reached by struggling through the resistances thrown up by the environment. If the resistance of the environment cannot be conquered, the individual does not progress and

proceeds on the slow road to death—either physical or psychological and mental. Temporary alienation with the environment leads to growth and permanent alienation leads to estrangement with the surroundings and, at least figuratively, death. (AE: 12-13)

Therefore, the meaningful experiential event is but part of a rhythm that leads, through consistent interaction with the environment to a consummation of the event. Consummation, or equilibrium, is not to be understood as finality. This consummation is not an “end” but, rather, a foundation for new experiences and a new beginning. Consummated experiences become grist for future experiences and new environments.

Here in germ are balance and harmony attained through rhythm. Equilibrium comes about not mechanically and inertly but out of, and because of, tension. ... There is in nature, even below the level of life, something more than mere flux and change. Form is arrived at whenever a stable, even though moving, equilibrium is reached. Changes interlock and sustain one another. Whenever there is coherence there is endurance. Order is not imposed from without but is made out of the relations of harmonious interactions that energies bear to one another. Because it is active (not anything static because foreign to what goes on) order itself develops. It comes to include within its balanced movement a greater variety of changes. (AE: 13)

When this order, or consummation, is reached, after periods of tension, disorder and disruption, the beginning of the aesthetic is at hand. The aesthetic is the intimate connection of the subject with the environment. In the process, both subject and environment undergo mutual change until the aesthetic experience reaches consummation. This consummated aesthetic experience, however, is

but a nascent stage for future experiences and is the bedrock upon which future understandings will build.

Only through this continuing, meaningful rhythm of the individual *in* and *of* the environment can one claim to be truly alive—or be a *live creature* as Dewey refers to the person who has complete interactions with the environment and takes part in the aesthetic. Only the live creature is capable of having the kind of experiences necessary for fulfillment and learning. Potency is in the struggle. The rhythm occurs through a continuous cycle of tension with the environment that is only resolved through intense connection and change in both the individual and the surroundings. Dewey characterizes the rhythm as “... loss of integration with environment and recovery of union ... its conditions are material out of which (man) forms purpose.” (AE: 14) Emotion results from the nascent or full-blown break and emotion is what is necessary to give rise to reflection. This discord and the concordant emotion that are induced transform this emotion into interest that, in turn, engenders new harmony.

Discord is not shunned but should be embraced if the individual is to grow. The tension and resistance offered by the environment are critical if the experience is going to produce a new basis for further growth. Through tension and resistance new potentials are created. Dewey likens this to the intellectual pursuits of the scientist wherein solutions to scientific problems set the stage for further investigation. The difference between this intellectual pursuit and the aesthetic is a matter of where one places the emphasis in the interaction

between the experiencer and the environment. Both the scientist and the artist think when acting with the environment. "The (scientist) has his esthetic moment when his ideas cease to be mere ideas and become corporate meanings of objects. The artist has his problems and thinks as he works. But his thought is more immediately embodied in the object. Because of the comparative remoteness of his end, the scientific worker operates with symbols, words and mathematical signs. The artist does his thinking in the very qualitative media he works in, and the terms lie so close to the object that he is producing that they merge directly into it." (AE: 15) This is not to say that scientific experiences are unaesthetic. However, the repetition of experiments and the testing of materials do not require the intimate environmental interaction of the aesthetic. New grounds are not set, necessarily, for future experiences. Conversely the "paradigm shifts" posited by Thomas Kuhn, certainly represent the aesthetic experience required by Dewey's understanding.

For the live creature, past experiences are foundational to constantly remaking him/herself. "To be fully alive, the future is not ominous but a promise; it surrounds the present like a halo." (AE: 17) The future becomes happily anticipatory because of the possibilities at hand. Dewey posits that a stable world or a world of steady state flux offers no chance at the aesthetic. The aesthetic is only possible because the actual world is "a combination of movement and culmination, of breaks and re-unions, ..." (AE: 16) Life is at its most intense when the discord of the environment is brought into a state of

harmony, or consummation. Dewey claims this harmony, to be meaningful, must be made on an objective basis for if the harmony is had any other way then the “harmony” is illusory. He goes as far to say that in extreme cases this can lead to insanity. (AE: 16) The recent rampage in Tucson bears witness to the potency of Dewey’s demand for an objective basis for obtaining harmony in experience. A consummation, correctly experienced, then leads to the beginning of a new relation with the environment. This new relation is the platform for all new experiences. “Only when the past ceases to trouble and anticipations of the future are not perturbing is a being wholly united with his environment and therefore fully alive. Art celebrates with peculiar intensity the moments in which the past reinforces the present and in which the future is a quickening of what now is.” (AE: 17)

Time and space are critical to the experience. Essentially both time and space comprise the organizing media of experience. Space is not just a void that is “out there” and filled with the components to which the individual reacts. Space is a complete and enclosed environ in which the multiplicity of doings and undergoing that comprise an experience occur. From this milieu the live creature emerges. Time is the organizing medium for change and growth. This change and growth give periods, breaks and gaps that signify the changes of disruption and harmony inherent in the experience. Time allows the completeness of experience to become the beginnings of new experience and development. “When a flash of lightning illumines a dark landscape, there is a

momentary recognition of objects. But the recognition is not itself a mere point in time. It is the focal culmination of long, slow processes of maturation. It is the manifestation of the continuity of an ordered temporal experience in a sudden discrete instant of climax." (AE: 24)

The aesthetic is extrinsic to the object at hand and is simply a function of the individual's experiential history with the object. One's perception of an object, event or idea determines the aesthetic value of that object, event or idea. Proper perception requires an integrated experience of the individual with the object, event or idea. Perception transcends the simple act of recognition. Recognition is, often, an isolated sense disconnected from previous experience. Perception brings the past into the present and adds richness to the current experience. This "expansion" of present experience translates the continuity of external time into an organizing principle of the experiential continuum. This organizing principle is the ability of man to consciously understand the relations of cause and effect in nature or the relation of means and consequences of our actions with the environment.

Dewey states, "Art is the living and concrete proof that man is capable of restoring consciously, and thus on the plane of meaning, the union of sense, need, impulse and action characteristic of the live creature." (AE: 26) Further, he claims art is the culmination of human intellectual accomplishment and that science then is the "handmaiden" of the arts. This is crucial to understanding the role of meaningful interactions with the environment when one truly has *an*

experience and is one with the world. This relation of art and science is fundamental also to von Clausewitz's understanding of the nature of war. As the next chapter illustrates, war—if viewed through a Deweyan lens—is an exemplar of the aesthetic or as the paradigm of art.

As David Hildebrand has noted, seen through the lens of history, philosophers viewed experience narrowly as mere sensation or as internal perceptions available only to the individual. Viewed this way, some philosophers, such as Plato and Descartes, tended to view this ever-changing flux of sensation as something either untrustworthy or unsuitable for any kind of metaphysical understanding. Other philosophers, such as Locke and Hume, found value in this concept of experience because they felt this offered some chance to view experience as something empirical and objective. Both views, however, led to puzzles that seemed ultimately unsolvable—for example, whether there exists an external world, other minds, or free will. Dewey sees these historical views of experience as mistaken and entirely untenable for solving the practical problems of living or taking one's place in the world. (Hildebrand, 35) Consequently, Dewey understands that a meaningful conception of experience must put the individual into his/her proper place in the world—as an integral part of the environment and an *active player* in the interaction between mankind and nature. This view is foundational if we are to be alive in the world. Only such a *live creature* is capable of experiencing the

aesthetic in the ordinary, normal course of living. Only the integrated individual can interact with the environment in such a way as to have *an* experience.

For Dewey, a vast difference exists between experiencing *something* and having *an* experience. "Oftentimes, however, the experience had is inchoate. Things are experienced but not in such a way that they are composed into *an* experience." (AE: 36) The former simply requires sense data to be felt while the latter demands interaction between the individual and the environment on a continuing, rhythmic, integral and dynamic basis. This cycle continues until no further change is manifest. Only at this point does one attain fulfillment. Often experience does not lead to the final end for which the experience was initiated. Reaching fulfillment or consummation can only be reached through a continuing process of interaction of the individual with the objective environment. This consummation then is the foundation for having new experiences. The consummation does not denote a closing of experience but, rather, a starting point from which to initiate a new experience.

An experience is distinct from simply having sensations or inputs from the environment. The vitality of *an* experience is expressed in our vocabulary by recalling the specificity of the event or giving that experience a specific name. We describe *that* meal, or *that* storm, or *that* symphony as opposed to saying "I had *a* meal" (or was caught in *a* storm or went to *the* symphony). One might experience a rainstorm but being in New Orleans when Hurricane Katrina arrives is *an* experience. Dewey amplifies,

In an experience, flow is from something to something. ... The enduring whole is diversified by successive phases that are emphases of its varied colors. ... Because of continuous merging, there are no holes, mechanical junctions, and dead centers when we have *an* experience. There are pauses, places of rest, but they punctuate and define the quality of movement. They sum up what has been undergone and prevent its dissipation and idle evaporation. Continued acceleration is breathless and prevents parts from gaining distinction. (AE: 38)

In *an* experience the experiencer fully engaged in a continuing interaction with the objective environment. Not until consummation—the starting point for future experience—can one claim to have had *an* experience.

Dewey notes that this cycle, which is determinative of the aesthetic quality of an experience, does not simply apply to the fine and practical arts but also applies to thinking. The process of interaction with ideas of thought (the intellectual environment) and drawing a meaningful and valid conclusion (the consummation) is a parallel process with aesthetic appreciation of the everyday arts—both fine and practical. *Engagement* is critical for *an* experience. The mundane, general disengagement, lack of curiosity, humdrum repetition and the like are all enemies of the aesthetic. These states of being stunt the aesthetic growth of the individual and stop the maturation process. “(A)n experience of thinking has its own esthetic quality. It differs from those experiences that are acknowledged to be esthetic, but only in materials. The material of the fine arts consist of qualities; that of experience having intellectual conclusion are signs and symbols having no intrinsic quality of their own, but standing for things

that may in another experience be qualitatively experienced. The difference is enormous and one reason why intellectual art will never be popular as music is popular.” (AE: 39)

Meaningful experience, necessary for growth and engagement with the environment, must be constant regardless of the pain or pleasure involved, but pain or pleasure in isolation are not determinants of the aesthetic. These emotions require space and time *within* an experience and inevitably lead to maturation of the individual. *An* experience is the pattern of doing and undergoing until consummation is reached. The *pattern*, the *process*, the *flow*, not the emotion felt, determines the aesthetic. The doing and undergoing must be in balance for the aesthetic. The balanced relationship between the doing and undergoing, the individual and the environment, the arrival at a consummatory state are what make the aesthetic. This continual interplay of doing and undergoing is a tension, which continues until seemingly all that can be gained from the rhythmic “give and take” has been gleaned. However, this apparent stasis only lasts until the environment changes or the individual has integrated the experience into a vast set of previous experiences. The groundwork is then set for new experiences. True stasis is conceptually unavailable in the continuum of experience. Once *an* experience is concluded, the bedding is set for future experience.

The artist and the viewer must always think in terms of the relationship of the environmental qualities to the individual. Passion (not to be confused with

emotion) can destroy this relationship and render the balance such that *an* experience escapes the hands of the individual. Control of an experience is a function of understanding and attaining the requisite balance of the doing and undergoing.

While passion can destroy the chance for *an* experience, emotion is a requisite for that experience. While earlier, and even many current, philosophers prize the controlling function of reason as the overriding condition for understanding our experiences, Dewey claims that emotions offer every bit as much to the undergoing and doing inherent in *an* experience if that experience is to offer any meaning at all. Dewey sees emotion as a fellow traveler with habit, which, as will be shown elsewhere, is also indispensable to the continuing nature of experience. Emotion is a reaction to, and in consonance with, the undergoing and doing that defines the continuity of *an* experience. This reaction then is a response that allows the individual to be in a synchronous mode with the condition present in the experience itself. Emotion is the result of the unknowns that present themselves in the experiential milieu.

In *Human Nature and Conduct* Dewey explains,

Habit is energy organized in certain channels. When interfered with, it swells as resentment and as an avenging force. To say that all will be obeyed, that custom makes law, that *nomos* is lord of all, is after all only to say that habit is habit. Emotion is a perturbation from clash or failure of habit, and reflection, roughly speaking, is the painful effort of disturbed habits to readjust themselves. (MW14: 54)

Hildebrand characterizes Dewey's understanding of emotion in experience, "As with other constituents of mental life, Dewey is reconstructing emotion along transactional lines and opposing the longstanding prejudice against the 'subjectivity' of emotions." (Hildebrand: 27) Emotion, then, is not something to be avoided or "conquered" but, rather, emotion is not only integral to meaning in experience but is to be welcomed and understood as a major component that makes *an* experience essential to a fully developed life.

Experience is often attenuated or abandoned by perceived obstacles present in the objective environment. These causes of interference with the individual's relation to the environment thwart the requisite cycle of doing and undergoing necessary for the aesthetic. Dewey says this interference may be excess on the side of doing or excess of receptivity, or the undergoing.

Zeal for doing, lust for action, leaves many a person, especially in this hurried and impatient human environment in which we live, with experience of an almost incredible paucity, all on the surface. No one experience has a chance to complete itself because something else is entered upon so speedily. What is called experience becomes so dispersed and miscellaneous as hardly to deserve the name. Resistance is treated as an obstruction to be beaten down, not as an invitation to reflection. An individual comes to seek, unconsciously even more than by deliberate choice, situations in which he can do the most things in the shortest time. (AE: 46)

Resistance, or perceived obstructions, is the basis for *an* experience not, as is often surmised, reasons to cut short an experience. The resistance is what gives the aesthetic meaning. By ignoring the positive lessons of resistance the experiencer may decide to cut short the experience. Thus will he or she

miss the lessons of the experience and end up stuck in the morass of the past. No new ground is broken and nothing is set for future experience. As Dewey characterizes this mode of behavior, he "... does not perfect a new vision in his process of doing, he acts mechanically and repeats some old model like a blueprint in his mind. ... The real work of the artist is to build up an experience that is coherent in perception while moving with coherent change in its development." (AE: 52) This concept is critical to Dewey's view of experience and also to von Clausewitz and his concept of experience in war.

A fuller understanding of Dewey's "precarious and perilous" nature of experience becomes essential if we are to eventually gain insight into von Clausewitz's conceptual basis of experience garnered in the arena of war and combat. This understanding builds on these concepts with special emphasis on those, which pertain to von Clausewitz's understanding of war and the military genius. Von Clausewitz's conception of war, the role of experience, and the military genius is the subject of the ensuing chapter.

A closing quote from Dewey regarding experience makes an apt analogy of experience with an army. He notes,

Experiencing like breathing is a rhythm of intakings and outgivings. Their succession is punctuated and made a rhythm by existence of intervals, periods in which one phase is ceasing and the other inchoate and preparing. ... As with the advance of an army, all gains from what has already been effected are periodically consolidated, and ways with a view to what is to be done next. If we move too rapidly, we get away

from the base of supplies—of accrued meanings—and the experience is flustered, thin, and confused. If we dawdle too long after having extracted a net value, experience perishes of inanition. (AE: 58)

CHAPTER III

THE PHILOSOPHICAL AMBIENCE OF VON CLAUSEWITZ'S "ON WAR"

It would be an immense service to teach the art of war entirely by historical examples, as Fenquière proposed to do; but it would be full work for the whole life of a man, if we reflect that he who undertakes it must first qualify himself for the task by a long personal experience in actual war. (OW: 237)

Carl von Clausewitz, renowned as a military thinker, is remembered in many ways—as an historian, strategist, tactician, educator and military leader. He was also a philosopher, arguably the only true philosopher of war. As a philosopher, a profession von Clausewitz does not claim for himself, his ideas, couched in the context of politics and the military, easily transcend a single activity and are germane to all undertakings that can lead to individual attainment and flourishing. As the above quote indicates, von Clausewitz places supreme emphasis on the concept of experience and the indispensability of experience, correctly understood, in the development of a military leader. This chapter explicates and expands the General's understanding of, and demands on, experience and the centrality of experience in developing the person of consummate capability. The "ultimate" military leader is an individual who grasps the most subtle nuances of, and successfully prosecutes, war at the highest levels. Von Clausewitz refers to that leader as the commander-in-chief, or a *military genius*. Once his conception of experience is fully articulated, the stage is set to undertake a comparison with John Dewey's understanding of

experience. The goal is to show that von Clausewitz had a complex, yet subtle, understanding of experience that presaged that of Dewey and which can be understood conceptually as a nascent version of what a century later became the bedrock of American pragmatism.

In an unpublished manuscript on the theory of war, written a decade and a half prior to the publication of his *magnum opus*, *On War*, von Clausewitz plainly states the necessity of experience in developing an understanding and intimacy with war. He says,

(Theory's) scientific character consists in an attempt to investigate the essence of the phenomena of war and to indicate the links between these phenomena and the nature of their component parts. No logical conclusion has been avoided; but whenever the thread became too thin I have preferred to break it off and go back to the relevant phenomena of experience. Just as some plants bear fruit only if they don't shoot up too high, so in the practical arts the leaves and flowers of theory must be pruned and the plant kept close to its proper soil—experience. ... Analysis and observation, theory and experience must never disdain or exclude each other; on the contrary, they support each other. The propositions of this book therefore, like short spans of an arch, base their axioms on the secure foundation either of experience or the nature of war as such, and are thus adequately buttressed. (HP: 61)

Two things should be noted regarding this passage. First, even at this early stage of the General's considerations of the nature of war *qua* war, experience played a central role in determining war's essence. Second, although this quote might infer a near equal footing for experience and theory, a correct limning shows the beginnings of a decided preference for experience as the determining

factor in gaining a true understanding of war. This view certainly becomes clear in *On War*. The connection between theory and experience remains a crucial distinction for von Clausewitz.

This chapter illuminates von Clausewitz's conception of experience as the defining factor in the development of the consummately accomplished warrior. As an introduction to his concepts, a concise exposition of the nature of war—as understood by the General—will lay the foundation for further understanding how experience develops the *military genius* and how experience is bedding for the practical art of war. After discussing his definition of war, the chapter will examine the consummate military professional, or *military genius*, as von Clausewitz refers to him or her. Once the reader understands the development of the *military genius*, the role of experience in military training is explored. This exploration links experience with the moral qualities of both the army and commander. The object is to gain insight into how experience is foundational for learning. Finally, the chapter examines war as art and science. Von Clausewitz's conception of both art and science laid a foundation for understanding war that runs parallel with Dewey's understanding of experience as the determinant of the aesthetic.

Prior to beginning the explication of the General's concepts, we must note he did not consider *On War* to be a completed work. He died an untimely death at the early age of fifty-one years. Von Clausewitz, in a note written a year prior to his death, stated quite clearly he only considered the first chapter of Book I to

be complete. (HP: 70) *On War*—even if viewed simply as a draft—is a robust work that clearly informs the reader of the grand concepts that the General thought necessary for the development of the consummate leader and for the successful prosecution of a victorious war. Those concepts will rest squarely on the correct understanding of experience.

What Is War?

For von Clausewitz, war is a duel. War is a grand duel made up of many smaller duels (the individual engagements or battles). War *always* entails violence (the means) seeking to gain compulsory submission of the enemy (the end). Succinctly put, “*War is an act of force to compel our enemy to do our will.*” (HP: 75) Physical force, or violence, is the means of conducting war. The ultimate object, or the *end*, of war is to impose our will on the enemy. The enemy nation must be put in a position in which no power remains with which that nation can lessen the victor’s ability to impose its will. The military requirement to render the enemy powerless is a requisite condition for the imposition of the victorious state’s will on the defeated enemy. Thus, military victory becomes a necessary condition—although, perhaps, not a sufficient condition—for the victors to be able to compel their will on the defeated nation. This understanding is the basis for the oft quoted view of von Clausewitz that, “war is nothing but the continuation of policy with other means.” (HP: 69) As war is a proxy for a political goal, the utmost force necessary to gain submission is permissible to accomplish the objective and the fact “civilized” nations engage

in war does not mitigate the requirement of destroying the enemy. Von Clausewitz cautions that trying to avoid bloodshed, out of a spirit of benevolence, leads to the worst errors in war. To try to hide the “real nature” of war is counter to one’s own interests and deflects the army from accomplishing the mission. This is not to say that bloodshed should be unwontedly pursued but, rather, the harshness and brutality of war must be accepted if the military and political objectives are to be attained. If civilized societies are less cruel and destructive than those “less civilized,” the differences are the results of societal world-views and communal understandings by the nations involved. That said, von Clausewitz mandates, in order to attain victory, the army must always seek to use the maximum force necessary to render the enemy forces powerless. For the “civilized” nation, any attenuation of maximum force can only be warranted because experience has taught that such mitigation is effective in obtaining the desired objective.

The demand for maximal use of force leads to an important concept in the understanding of war. If to achieve victory an army should employ the maximum force available, war would lead to an extreme in all cases. That is, if each side must respond to the actions of the other and employ enough force to destroy their respective opponent, a cycle of escalation arises in which *all* available forces must be used. This applies not only to strength in numbers, or available manpower and materiel, but also to the will of the enemy. Von Clausewitz emphasizes that gauging the enemy’s physical strength is difficult

but gauging their strength of will is even more difficult. The strength of will is every bit as important as the order of battle on each side and must be understood in order to properly know the strength of one's adversary. The strength of the army, physically, is on a par with the political and military strength of will. In contemporary times, the importance of strength of will, relative to the physical strength of the military forces, is best exemplified in America's recent war in Vietnam and the current wars fought as a result of terror. In these cases the side with the weakest military strength effectively engaged powers superior in manpower and resources. This can be attributed to a strong (or perhaps stronger) strength of will on the part of the physically weaker side. An adequate response to such powerful determination demands responses that, in the absolute, must drive toward an extreme.

Similarly, the demand to disarm the enemy so that enemy is forced to comply with the will of the victor requires the enemy to be in a permanent state of oppression so no opportunity to defy the will of the victor exists. The condition of defeat must be permanent and cannot be of a fleeting or temporary nature. Any condition remaining that allows the enemy to defy the victor's will could result in a resumption or reinstatement of the conditions that led initially to the war. Worse, a resumption of actual hostilities might occur. History is replete with examples of such occurrences. Perhaps the most obvious example is the conditions of surrender after World War I, which allowed the Axis powers to reconstitute their military and political forces that, in a relatively short

period, led to the hostilities of World War II. Since the imposition of the state's will on their opponent is the goal of *both* sides in the war, a tendency toward extremes is evident.

A final factor, "the utmost use of power," also leads, in the abstract, each side to extremes. The "utmost use of power" means more than simply the strength of the army or its strength of will cited earlier. The General acknowledges that civilized nations do, and must, continually improve their methods and means of combat in order to exploit all available opportunities of destroying the enemy. This quest for ever-improving destructive power, often through technology, is another factor that leads to war seeking an extreme. Von Clausewitz cites gunpowder as an invention that pushed warfare to the extreme of the maximum use of power. Today, we might cite nuclear weapons or terror tactics as examples of "advances" that lead to such extremes.

Von Clausewitz describes such wars in the abstract, or that war which will inevitably lead to and be fought in the extremes, as an absolute or unlimited war. Wars, he claims, fought at the extremes are only possible in the abstract sense.ⁱⁱ He further notes that such a war could only be fought if an army were engaged against an opponent that responded as predicted. An opponent who responded as theory might predict or as expected during the planning phases of the war would make war predictable. War in the abstract is, however, impossible. The General notes, war is fought in the *real* world and, as such, war is fought against living, reactive forces that do not behave in accordance with

theory. *Real* war constitutes engagements between armies (combatants) that react to each other as living organisms. Reactions are completely unpredictable as each side acts and reacts relative to the opponent's actions. This unpredictable nature of all wars limits the ability of each side to carry on the war in the manner that pure theory might dictate. Abstract war of inevitable extremes, therefore, becomes impossible.

Absolute, or unlimited, war could be possible von Clausewitz notes, "(a) ... if war were an isolated act, occurring suddenly and not produced by previous events in the political world; (b) it consisted of a single decisive act or a set of simultaneous ones; (c) the decision achieved was complete and perfect in itself, uninfluenced by any previous estimate of the political situation it would bring about." (HP: 78) The General immediately proceeds to discuss why none of the conditions that might, in the abstract, allow for an absolute war could obtain in practice. For the purposes of this dissertation, several factors, which militate against absolute (abstract) war, are germane to what will eventually be shown to be central to the experiential requirements of the *military genius*. As von Clausewitz explains, war can never be an isolated act because neither side's opponent is an abstract entity. Not only is assessing the power of physical resistance problematic, but even the strength of the enemy's will is subject to external conditions and cannot be understood in the abstract. Each side can only react to what the other side does and no plan can be carried out in an absolute sense. Likewise, no war can be fought in a "single blow" or in a set of

parallel blows. Resources, environment, physical terrain, the reaction of each side's allies and other factors are such that all forces cannot be brought to bear at once to maximize the power of the army. These "resistances" all reduce the ability of the forces to act at once and impede the effectiveness of any single act. Last, and perhaps most significant, absolute war is impossible because no victory can be considered final. Defeat may be a temporary state that, once conditions become favorable for the vanquished party, eventually turns into renewed conflict. The lesson is that absolute war can only be fought in the abstract; war *in concreto* is fought in the real world of uncertainty, chance, luck, and probabilities.

Von Clausewitz asserts other causes remove real war from the realm of the abstract.

There is still another factor that can bring military action to a standstill: imperfect knowledge of the situation. The only situation a commander can know fully is his own; his opponent's he can only know from unreliable intelligence. His evaluation, therefore, may be mistaken and can lead him to suppose that the initiative lies with the enemy when in fact it remains with him. ... The possibility of inaction has a further moderating effect on the progress of war by diluting it, so to speak, in time by delaying danger, and by increasing the means of restoring a balance between the two sides. The greater the tensions that have led to war, and the greater the consequent war effort, the shorter these periods of inaction. Inversely, the weaker the motive for conflict, the longer the intervals between actions. For the stronger motive increases willpower, and willpower, as we know, is always both an element in and the product of strength. (HP: 84-85)

The will predominates as the main motivating factor in determining victory. Inaction and interruptions of activity further remove war from the “realm of the absolute” and makes success in war dependent on a “matter of assessing probabilities.” (HP: 85) As war veers from the absolute (theoretical) to the “real,” the commander must react based on his or her assessment of probabilities. The military leader is now dependent on the ability to infer correct actions based on understanding the “truths” in the situation. If assessments of probability alone were needed to determine the best actions in war then war, even though removed from the absolute, would still be an objective endeavor. That is, the commander best able to assess the objective probabilities in any situation would have the distinct advantage. This *objective* nature of war is, however, attenuated by chance. Von Clausewitz emphasizes that chance makes war a gamble. He characterized chance as “the very last thing that war lacks;” that is, war is rife with the unknown. Further, “No other human activity is so continuously or universally bound up with chance. And through the element of chance, guesswork and luck come to play a great part in war.” (HP: 85) All of these elements are inherent in experience and are central to preparing the commander for future actions.

Once the concept of chance is embedded into war in the real world, von Clausewitz claims that war is now a *subjective* endeavor and, once the required means for fighting are understood, will appear to be nothing but a gamble. War is fought in a continual milieu of *danger* and danger can only be mitigated by

moral qualities of the individual. The highest of these moral qualities is *courage*. The General makes clear that courage is not inconsistent with correct assessment of probabilities and the attendant requirement for prudent calculation. Nonetheless, courage and its variants—boldness, rashness, reliance on good fortune—search out the fortuitous, the accidental and chance. This is the environment in which courage is paramount. In the later discussion of the *military genius* the character of courage necessary for the commander of an army is further “thickened.” The *subjective* nature of war is always at the fore and is the environment in which the commander must act. “We see, therefore, how, from the commencement, the absolute, the mathematical as it is called, nowhere finds any sure basis in the calculations in the Art of War; and that from the outset there is a play of possibilities, probabilities, good and bad luck, which spreads about with all the coarse and fine threads of its web, and makes War of all branches of human activity the most like a gambling game.” (OW: 117)

While our intellect tells us to look for clearness and certainty, von Clausewitz says our human nature is attracted by uncertainty.

(Our nature) prefers to day-dream in the realm of chance and luck rather than accompany the intellect on its narrow and tortuous path of philosophical enquiry and logical deduction only to arrive—hardly knowing how—in unfamiliar surroundings where all the usual landmarks seem to have disappeared. *Unconfined by narrow necessity, it can revel in a wealth of possibilities; which inspire courage to take wing and dive into the element of daring and danger like a fearless swimmer into the current.* ... Should theory leave us here, and cheerfully go on elaborating absolute conclusions and prescriptions? Then it would be no use at all in real life. No, *it*

must also take the human factor into account, and find room for courage, boldness, even foolhardiness. The art of war deals with living and with moral forces. Consequently, it cannot attain the absolute, or certainty; it must always leave a margin for uncertainty, in the greatest things as in the smallest. With uncertainty in one scale, courage and self-confidence must be thrown into the other to correct the balance. (HP: 86) (Italics mine)

Uncertainty is the inherent domain of war. The cauldron of battle begins to afford the soldier the necessary experiences to mold him or her for future command and leadership experiences. Yet to be shown is how these experiences set the stage for the development of the *military genius*. In the passage above, von Clausewitz makes two important observations linking uncertainty with the potential offered through meaningful experience. First, uncertainty is the means of realizing “a wealth of *possibilities*.” Only through an environment rich in opportunities and possibilities can we weave the tapestry needed to make the genius—the person with a capability for excellence. The other noteworthy concept in the cited observation is that war is fought with “*living and moral forces*.” For von Clausewitz, armies are living organisms that react and respond, as would any living entity; rarely are these responses predictable or set within a knowable environment. The commander can only respond appropriately if he or she has developed the right “moral” virtues, such as courage, self-reliance, daring, the “inner eye,” and the like. The reactions, based on the moral virtues of the army and the commander, constitute what von Clausewitz refers to as “moral forces.” The concept that the richness of

possibility and the development of moral forces can only germinate in appropriately gained experience is next broadened and, later, detailed.

Von Clausewitz's notion of war requires the commander-in-chief, the leader of the military forces, to be much more than a battlefield general. War transcends individual battles and actions of soldiers. War is the most serious business in which peoples engage. He contends,

But war is no pastime; no mere passion for venturing and winning; no work of a free enthusiasm: it is a serious means for a serious object. All that appearance which it wears from the varying hues of fortune, all that it assimilates into itself of the oscillations of passion, of courage, of imagination, of enthusiasm, are only particular properties of this means.

The War of a community—of whole Nations, and particularly of civilized Nations—always starts from a political condition, and is called forth by a political motive. It is, therefore, a political act. (OW: 118)

The political nature of war is important for the complete development of the commander. Not only must he or she know the requisite conditions for which the war is being fought but must ensure the war is fought for those political ends. Conversely, the means available for war must also shape the political ends for which the war is pursued. The fact that the political aim is paramount does not suggest those aims are all controlling. The political aim must adapt and change to suit the capabilities of not only the army but also the commanders in charge. Nevertheless, policy is the ruling factor but must accommodate military necessity and capability. "We see, therefore, that war is not merely an act of policy but a true political instrument, a continuation of political intercourse,

carried on with other means. What remains peculiar to war is simply the peculiar nature of its means. War in general, and the commander in any specific instance, is entitled to require that the trend and designs of policy shall not be inconsistent with these means.” (HP: 87) Or, as the General is more popularly quoted, “War is a mere continuation of policy by other means.” (OW: 119)

Book I, Chapter I, section 28 of *On War* contains, perhaps, one of the most noted and noteworthy descriptions in von Clausewitz’s conception of war. Here he metaphorically argues that war is akin to a chameleon, an entity that adapts to the conditions of its specific environment. War adapts as a whole with changes occurring in a tri-partite amalgam of the parts that make up the entire endeavor. The General describes war as a “paradoxical trinity—composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam; and of its element of subordination, as an instrument of policy, which makes it subject to reason alone.” (HP: 89) The first part of the trinity of war concerns the people, the second is the purview of the army and the general, and the last relates to the government and is the outcome of policy. All three of these parts depend on each other and to ignore any single spoke of the Trinitarian wheel conflicts with reality. Von Clausewitz demands that, if these three parts are to play their appropriate roles, they be kept in balance with one another. The remainder of the dissertation places emphasis on the role

of the commander and the army while remembering one can never neglect the necessity of balance with the people and the government.

The Genius for War

Von Clausewitz conceives of the person capable of successfully commanding, directing and leading the war effort as a *military genius*. His introduction to the concept of “genius” is thus stated: “Any complex activity, if it is to be carried out with any degree of virtuosity, calls for appropriate gifts of intellect and temperament. If they are outstanding and reveal themselves in exceptional achievements, their possessor will be called a ‘genius’.” (HP: 100) The General is quite aware the term, genius, is often used in many ways that differ in scope and signification. He claims most uses of the word do not allow for a true understanding of the essence of genius so he simply says that he will use the term to mean “a very high mental capacity for certain employments.” (OW: 138) This understanding may appear overly broad for philosophical dissection but the General proceeds to develop a finely tuned explanation of how a *military genius* comes to be.ⁱⁱⁱ

Von Clausewitz’s use of “high mental capacity” as a signification of genius is, perhaps, misleading. Immediately after giving the reader a broad definition for genius, he indicates that this definition is not sufficient for defining military genius. Trying to discuss genius in terms of “degree of talent” are not sufficient because the entire concept cannot be measured or considered objectively. We must, therefore, “survey all those gifts of mind and temperament that in

combination bear on military activity. These, taken together, constitute the *essence of military genius*.” (HP: 100) The *combination* of the gifts of mind and temperament are critical to the definition of genius because no single component—say, intellect or moral virtue such as courage—sufficiently characterizes genius. This may seem counterintuitive to some as we often, in common usage, ascribe genius to superior intellect or artistic ability. For von Clausewitz this is insufficient. For true genius, “*a harmonious combination of elements*, in which one or the other ability may predominate, but none may be in conflict with the rest” is the requisite standard. (HP” 100) The harmonious elements that make military genius must be understood if we are to appreciate how this genius is formed.

War, von Clausewitz affirms, is always conducted in an environment of danger, physical exertion and suffering, uncertainty, and chance. Danger is endemic in all war. Consequently, the first quality of a warrior is to exhibit courage. Courage consists of two categories, physical courage in the presence of danger to the person and moral courage or the ability to accept responsibility. (OW: 139) The first category, courage in the presence of danger is sub-divided again into two types, indifference to danger or behavior resulting from positive motives such as pride, patriotism and other enthusiasms. The General asserts the first type is more dependable and comes from development of personal habit or disposition. The second type results in more firmness and is often characterized by bold behavior. The second category, courage to accept

responsibility, is critical for the development of genius because that courage is what distinguishes the genius from the common soldier and warrior. This idea is developed later in this section.

War is also conducted in an environment of physical exertion and suffering. To function well during physical stress, amid suffering and pain, the leader must become capable of decisive action under extreme physical, psychological and emotional conditions. Hence, “These will destroy us unless we can make ourselves indifferent to them, and for this birth or training must provide us with a certain strength of body and soul. If we do possess those qualities, then even if we have nothing but common sense to guide them we shall be well equipped for war ...” (HP: 101) Von Clausewitz claims, that to understand all demands that war imposes on the individual, we must examine the leader’s “powers of the intellect.” To be clear, he does not mean some metric—such as intelligence quotient or academic accomplishment—will enable a determination of one’s ability to handle the vagaries of war but, rather, this ability is only gained internally either through natural gifts of birth or by development gained through experience.

Yet, a third aspect of the environment of war is uncertainty. Von Clausewitz asserts that three-fourths of all considerations that determine actions in war are hidden in “a fog of greater or lesser uncertainty.” (HP: 101) Although von Clausewitz never used the term “fog of war,” he most certainly put great weight on that concept and made the miasma of uncertainty foundational for his

philosophy of war and experience. To deal with constant uncertainty requires not a great intellect but a “skilled intelligence and discriminating judgment,” which is developed in combat. This allows the individual to ferret out the “truth” of the situation. Intelligence *per se* is not to be denigrated in the *military genius* but is not the determinant of how the leader deals with uncertainty. Von Clausewitz says that average intelligence may fumble along and often arrive at some truth but, in the end, average intelligence results in “indifferent achievement.” On the other hand, he also tells us that the super-bright, or the academic, may also be doomed to failure because he or she becomes crippled by doubt by trying to determine all the facts necessary for a quick and accurate decision. This will not do in the context of uncertainty.

Finally, war is conducted in a domain of chance. “War is the province of chance. In no sphere of human activity is such a margin to be left for this intruder, because none is so much in constant contact with him on all sides. He increases the uncertainty of every circumstance, and deranges the course of events.” (OW: 140) The commander must make timely decisions amid a swirl of uncertainty based on his or her best understanding of the appropriate factors. Chance makes this uncertainty even more problematic as new, but perhaps unexpected, information comes to light. When must new plans be drawn? Does the commander have sufficient reason to continue with the current plan? Von Clausewitz claims that chance makes new information even more problematic because new information makes the commander more, not less, uncertain.

Scarcely a few, if any, are capable of functioning effectively in the environment of chance. Only the *military genius* is so capable. Von Clausewitz offers, in his analysis of the role of chance in war, an emergent description of that genius.

If the mind is to emerge unscathed from this relentless struggle with the unforeseen, two qualities are indispensable: *first, an intellect that, even in the darkest hour, retains some glimmerings of the inner light which leads to truth; and second, the courage to follow this faint light wherever it may lead.* The first of these qualities is described by the French term *coup d'oeil*; the second is *determination*. (HP: 102)

This description sets the stage for an exegesis of von Clausewitz's demands on experience. Both *coup d'oeil* and determination are the hallmarks of the *military genius*. Both qualities result solely from appropriate and meaningful experience.

Conceptually, *coup d'oeil* is a central organizing concept around which the *military genius* can best be characterized. Today's military might use the term "situational awareness" to describe a person's ability to understand what is happening in the environment surrounding the actions of combat. *Coup d'oeil* most certainly includes that understanding of awareness but is much more encompassing. Von Clausewitz says, in combat, time and space are critical and often demand "*rapid and accurate decisions.*" The warrior's evaluation of time and space refers to a physical estimation of the environment or, more specifically, a visual estimate of what is happening around him or her. This defines situational awareness. This view is constraining because the attendant decisions that depend on a correct

estimation of the combat environment (the “fog of war”) are not a part of, nor are they included in, the concept of immediate awareness. The French (read “Napoleon”) view is more inclusive. *Coup d’oeil* transcends the merely physical assessment of the combat situation and ascends to the resultant decisions where, at the highest levels, the entire war is apprehended in context. Hence, the concept encompasses not only the tactical but also the strategic. *Coup d’oeil*, therefore, is often broadly translated as “the inward eye” (HP: 102) or “the correct judgment by eye.” (OW: 141) Von Clausewitz sums up the concept concisely as follows: “Stripped of metaphor and of the restrictions imposed on it by the phrase, the concept merely refers to the quick recognition of a truth that the mind would ordinarily miss or would perceive only after long study and reflection.” (HP: 102)

Determination, or resolution, demonstrated in any given instance is a sign of courage, but if shown as a consistent characteristic of the individual, that determination becomes a habit of the mind. This habit, or courage, is not synonymous with physical courage but, rather, shows the courage to accept responsibility in the face of moral danger. “This has often been called *courage d’esprit*, because it is created by the intellect. That, however, does not make it an act of the intellect: it is an act of temperament.” (HP: 102) Von Clausewitz tells us that courage is not an intellectual act because even the most intelligent individuals are often irresolute. He believes man is governed by internal feelings and thought alone is insufficient for

courageous actions. The courage demanded by the commander or genius is not the courage of his or her actions as applied to one's self but, rather, the courage to accept responsibility for others—in the case of the commander-in-chief, the courage to accept responsibility for the entire war as well as the armed forces. Consequently, determination dispels doubt by a specific turn of mind. This courage of responsibility demands certain moral virtues and qualities that are only possible through extensive experience.

Determination results through a boldness that “directs” the will. This will, or “cast of mind” is one that shuns hesitation, equivocation and doubt. This ability of men and women of determination to suppress fear of action and to press boldly forward is “engendered only by a mental act.” (HP: 103) By this, von Clausewitz intends to show that determination requires reflection and only by introspection and reflection can doubt and fear to act be overcome. Reacting by reflex does not constitute determination but rather unguided activity. Without reflection one can have no doubts, but the strong and determined individual uses the fear of *not* acting to reflect on and conquer his or her doubts. The *military genius* epitomizes the determined leader.

Men of low intelligence, therefore, cannot possess determination in the sense in which we use the word. They may act without hesitation in a crisis, but if they do, they act *without reflection*, and a man who acts without reflection cannot, of course, be torn by doubt. From time to time action of this type may even be appropriate; but, as I have said

before, it is the *average result* that indicates the existence of *military genius*. ...

In short, we believe that determination proceeds from a special type of mind, from a strong rather than a brilliant one. We can give further proof of this interpretation by pointing to the many examples of men who show great determination as junior officers, but lose it as they rise in rank. Conscious of the need to be decisive, they also recognize the risks entailed by a *wrong* decision; since they are unfamiliar with the problems now facing them, their mind loses its former incisiveness. The more used they had been to instant action, the more their timidity increases as they realize the dangers of the vacillation that ensnare them. (HP: 103)

Reflection is that quality that gives strength, psychologically, to the leader and takes place in a context of constant resistance. As Dewey describes, “But experience, taken free of the restrictions imposed by the older concept, is full of inference. There is, apparently, no conscious experience without inference; reflection is native and constant.” (MW10: 6) Resistance persists and influences the commander’s sense of responsibility. This resistance creates anxiety and tests his or her strength of will. This test the commander alone must bear. Likewise, enemy actions directly affect the fighting forces, the men and women in combat, but the effects of this action works on the commander as a direct result transmitted through the forces.

Von Clausewitz concisely describes this burden of command that is the inherent environment of the leader, the *military genius*. He states,

It is the impact of the ebbing of moral and physical strength, of the heart-rending spectacle of the dead and wounded, that the commander has to withstand—first in himself, and then in those who, directly or indirectly, have entrusted him with their thoughts and feelings, hopes and

fears. As each man's strength gives out, as it no longer responds to his will, the inertia of the whole gradually comes to rest on the commander's will alone. The ardor of his spirit must rekindle the flame of purpose in all others; his inward fire must revive their hope. Only to the extent that he can do this will he retain his hold on his men and keep control. Once that hold is lost, once his own courage can no longer revive the courage of his men, the mass will drag him down to the brutish world where danger is shirked and shame is unknown. Such are the burdens that the commander's courage and strength of will must overcome if he hopes to achieve outstanding success. *The burdens increase with the number of men in his command, and therefore the higher his position, the greater the strength of character he needs to bear the mounting load.* (HP: 104-105) (emphasis added)

Strength of character, for von Clausewitz, is not action based on feeling or passion but, rather, the ability to stay calm and act consistently in times of extreme stress and agitated emotion. This ability does not result solely from intellect; this ability is a matter of self-control, which itself is an emotion exhibited by a certain kind of temperament. This temperament acknowledges that passion exists but that decisions must be made on as rational a basis as possible. Appropriate experience allows for this rational behavior in the fog of war. In sum, strength of character is an ability to maintain balance in the presence of great emotion and to act with steady firmness in a "stable and constant" manner under the most trying conditions.

In the making of *military genius*, the role of imagination is paramount. Von Clausewitz's use of the word "imagination" is somewhat different than how we might today use that term. He develops the concept of imagination in his discussion of the commander and his or her relationship with the terrain.

Terrain is of utmost importance and understanding the terrain's potential for deciding not only the outcome of a battle, but potentially the entire war, demands that the commander has an intimate apprehension of the multiple possibilities that terrain has in deciding victory or defeat. The General contends,

This problem is unique. To master it a special gift is needed, which is given the too restricted name of *a sense of locality*. It is the faculty of *quickly and accurately grasping the topography of any area* which enables a man to find his way about at any time. Obviously this is an act of the imagination. Things are perceived, of course, by the naked eye and partly by the mind, which fills the gaps with guesswork based on learning and experience, and thus constructs a whole out of the fragments that the eye can see; but if the whole is to be vividly presented to the mind, imprinted like a picture, like a map, upon the brain, without fading or blurring in detail, *it can only be achieved by the mental gift that we call imagination*. A poet or a painter may be shocked to find that his Muse dominates these activities as well ... A commander-in-chief ... can draw general information from reports of all kinds, from maps, books, and memoirs. Details will be furnished by his staff. Nevertheless it is true that with a quick, unerring sense of locality his dispositions will be more rapid and assured; he will run less the risk of a certain awkwardness in his concepts, and be less dependent on others. (HP: 109-110)

This description is nothing less than a demand for a developed temperament that can only be had from a base of varied and frequent experiences in war and its surrounding. Having discussed requirements of command terms of the intellect and moral powers, von Clausewitz concludes that the term “genius” must be reserved for those who excel at the highest levels—the commanders-in-chief. Only at those levels are the intellectual and moral powers the greatest.

A final note on the *military genius* is essential to understanding the role he or she must play. As noted earlier, war is an extension of politics. Consequently, a successful war can only be brought about if the commander-in-chief is thoroughly acquainted with national policy. National policy and military strategy must be synchronous and cannot, at any level, diverge. This requirement demands that the commander-in-chief is, at the same time, a statesman. Even though the demand requires this commander to function in the realm of national policy, he or she must never forget the requirement, at the same time, to act as a general. “What this task requires ... is a sense of unity and a power of judgment raised to a marvelous pitch of vision, which easily grasps and dismisses a thousand remote possibilities which an ordinary mind would labor to identify and wear itself out in doing so.” (HP: 112)

Friction and Resistance

The *military genius* operates in the quixotic milieu of the battlefield. As has been previously shown, this miasma is a sea of probabilities, uncertainties, chance, serendipity and misfortune. All actions, both at the tactical level of individual combat as well as at the strategic level in which the entire war is prosecuted, are carried out with constant resistance from not only the enemy but also the environment, inadequate military intelligence, bodily effort, and the like. The only way one can cope with these “frictions” (as von Clausewitz calls them) is through experience—intimacy in the actual conduct of war. He opens Book I, Chapter VII, as follows:

If one has never personally experienced war, one cannot understand in what the difficulties constantly mentioned really consist, nor why a commander should need any brilliance and exceptional ability. Everything looks simple; the knowledge required does not look remarkable, the strategic options are so obvious that by comparison the simplest problem of higher mathematics has an impressive scientific dignity. Once war has actually been seen the difficulties become clear; but it is still extremely hard to describe the unseen, all-pervading element that brings about this change of perspective. (HP: 119)

Simply put, without experience one cannot conceive of the difficulties of war. The difficulties of war are the results of the resistances, or frictions, that can only be dealt with if the commander has the “inner eye” and determination to do so. Only experience offers the commander the opportunity to develop these capabilities or “moral virtues.”

Friction—resistance—is what separates real war from theoretical war. Not only does resistance come from the environment and the actions of the enemy but also resistance comes from within the being of each individual soldier. Battle plans, order of battle, grand strategy, tactics, and the like are all determined in a theoretical manner. Von Clausewitz reminds us that all of these things may look easy in theory, but “In fact, it is different, and every fault and exaggeration of theory is instantly exposed in war.” (HP: 119) He notes, further, that these resistances are everywhere and ever present—both spatially and temporally—and can take up volumes if we try to foresee them all. Only those who have the appropriate prior experiences in this world of friction can

function well when new and unexpected scenarios are presented. Past experience is prologue.

The only experience that is appropriate for developing the *military genius*, therefore, is experience gained in actual, real war. The General clearly realizes that “every war is rich in unique episodes. Each is an uncharted sea, full of reefs. The commander may suspect the reefs’ existence without ever having seen them; now he has to steer past them in the dark. If a contrary wind springs up, if some major mischance appears, he will need the greatest skill and personal exertion, even the utmost presence of mind, though from a distance everything may seem to be proceeding automatically.” (HP: 120) The anxious general may think he or she can prepare the troops so well as to rid war of the friction and resistance. This is not the case. The good and effective general knows resistance will always be present and is prepared, by previous experience, to deal with these frictions as they arise. No theory can prepare a commander for resistances and frictions and, consequently, theory becomes a bystander once war begins.

Book I, Chapter VII, ends thus:

As with a man of the world instinct becomes almost habit so that he always acts, speaks, and moves appropriately, so only the experienced officer will make the right decisions in major and minor matters—at every pulsebeat of war. Practice and experience dictate the answer: “this is possible, that is not.” So he rarely makes a serious mistake, such as can, in war, shatter confidence and become extremely dangerous if it occurs.

Friction, as we choose to call it, is the force that makes the apparently easy so difficult. We shall frequently revert to this subject, and it will become evident that the eminent

commander needs more than experience and a strong will. He must have other exceptional abilities as well. (HP: 120-121)

As he concludes the first chapter of *On War*, von Clausewitz reiterates his main points. He asks if anything can act as an antidote to the friction that impedes progress in war. "In their restrictive efforts they can be grouped into a single concept of general friction. Is there any lubricant that will reduce this abrasion? Only one, and a commander and his army will not always have it readily available: *combat experience*." (HP: 122) (emphasis added)

Experience allows the army, from foot soldier to the commanding general, to develop the habits necessary to deal with friction. Habit strengthens the body, engenders spirit and courage, but also, and more importantly, allows the commander to suspend judgment against first impressions. Training is not a substitute for actual combat experience. Since armies are not constantly at war, von Clausewitz demands that effective training must include as many elements of friction as possible. Operating and training in the shifting and amorphous environment endemic to combat is the only way to have the requisite experiences that lay the groundwork for the future.

Theory, Practice, and Moral Forces

Von Clausewitz's views of theory, in general, are such that theory offers items for study and perhaps some guides for behavior, but that theory itself gives little of value for the conduct of actual war. This holds true especially at

the strategic level, which is the purview of the commander-in-chief. He emphasizes this as follows:

It is only analytically that these attempts at theory can be called advances in the realm of truth; synthetically, in the rules and regulations they offer, they are absolutely useless.

They aim at fixed values; but in war everything is uncertain, and calculations have to be made with variable quantities.

They direct the inquiry exclusively toward physical quantities, whereas all military action is intertwined with psychological forces and effects.

They consider only unilateral action, whereas war consists of a continuous interaction of opposites. (HP: 136)

Using this observation of the nature of theory, von Clausewitz arrives at a stunning conclusion. If theory cannot, scientifically, guide forces in combat then all attainment in war rests in the hands of the *military genius*. Victory depends on the genius and, consequently, *genius makes the rules*. "Pity the soldier who is supposed to control among these scraps of rules, not good enough for genius, which genius can ignore, or laugh at. No, what genius does is the best rule, and theory can do no better than show how and why this should be the case. Pity the theory that conflicts with reason! No amount of humility can gloss over this contradiction; indeed, the greater the humility, the sooner it will be driven off the field of real life by ridicule and contempt" (HP: 136) Benoit Durieux notes, "Indeed, Clausewitz does not wish to propose solutions for the military commander, because such solutions, supposing they were possible, would limit his freedom of action. On the contrary, he wants to enable him to exercise his freedom of action." (Durieux: 252) This concept can be succinctly stated in an

old United States Air Force saying, “We only need regulations for those who cannot lead!”

The General gives examples of how this concept comes into play when “moral factors” are involved. Moral factors are those qualities, which the military, the people, and the government exhibit in the conduct of war. The factors are the human element that give war its quixotic nature and help to make the entire effort unpredictable. The architect and the painter know all the theory behind what materials to use and how to mathematically calculate the forces on an arch or the right angles to consider for illustrating a certain perspective but, as the General tells us, when the aesthetic nature of their work comes into play—when they aim at a particular effect on the mind or senses—all the rules of theory dissolve. This, too, is what happens in warfare. Like Dewey, von Clausewitz uses the example of medicine and the organism to show how theory cannot give concrete answers for actions in the “real” world. Medicine deals with the physical phenomena of the body, but an animal organism is always changing and reacting to the environment in which that organism finds itself. The organism is different at each and every moment. “This renders the task of medicine very difficult, and makes the physician’s judgment count for more than his knowledge. But how greatly is the difficulty increased when a mental factor is added, and how much more highly do we value the psychiatrist!” (HP: 136-137) In war the *military genius* is the counterpart of the psychiatrist given in the General’s example. The moral factors in war are a

parallel for the mental factor in medicine. These moral factors cannot be ignored and form the core of the environment in which appropriate experiences are to be had.

Military action is often conceived as a struggle between opposing material forces. While this is indeed true, this view captures only the superficial aspect of war. War is always, von Clausewitz asserts, aimed simultaneously at the very moral forces that give life to that activity. The material and the moral forces are always inextricably linked. While the material forces are subject to analysis by intelligence reports, order of battle tables, and the like, the “moral values can only be perceived by the inner eye, which differs in each person, and is often different in the same person at different times.” (HP: 137)

War is fought in the realm of danger. Everything in war happens in an environment of pervasive threat of death. As we have shown, courage is the counter to danger and is what gives the soldier his or her strength to act. We should not forget the two types of courage von Clausewitz considers important and to which level of leadership each applies. Courage is what allows individuals engaged in war to exercise judgment and is the prism through which all “impressions pass to the brain. And yet there can be no doubt that experience will by itself provide a degree of objectivity to those impressions. ... All these and similar effects in the sphere of the mind and spirit have been proved by experience: they recur constantly, and are therefore entitled to

receive their due as objective factors. ... Of course these truths must be rooted in experience, ..." (HP: 137)

Von Clausewitz is adamant in claiming what kind of knowledge that the commander must possess. He is firm in asserting that no leader can learn the requisite knowledge from books or theory. While the architect, artist, philosopher, and businessperson might learn enough to function within their respective professions in this manner, knowledge gained this way does not allow the practitioner's "personality" to be expressed through their work. This, too, applies to the military leader but the consequences are dire if the commander fails to gain his or her knowledge via experience. In the section of Book II, Chapter II, entitled "Knowledge Must Become Capability, the General makes this clear:

One more requisite remains to be considered—a factor more vital to military knowledge than any other. Knowledge must be so absorbed into the mind that it almost ceases to exist in a separate, objective way. In almost any other profession a man can work with truths he has learned from musty books, but which have no life or meaning for him. ... It is never like that in war. Continual change and the need to respond to it compels the commander to carry the whole intellectual apparatus of his knowledge with him. He must always be ready to bring forth the appropriate decision. By total assimilation with his mind and life, the commander's knowledge must be transformed into a genuine capability. That is why it all seems to come so easily to man who have distinguished themselves in war, and why it is all ascribed to natural talent. We say *natural talent* in order to distinguish it from the talent that has been trained and educated by reflection and study. (HP: 147)

The centrality of experience is clear in the making of the *military genius*. The entire purpose of having the right kind of experiences—which can only be gained in combat—is to develop commanders who can internalize their “knowledge” so that all new situations which are presented in the cloaks of uncertainty and resistance can be appropriately attacked and handled. This continuing loop of experience is a precarious yet constant environment for the *military genius*.

War as Art or Science?

Von Clausewitz addresses the question whether war should be considered as art or a science. He acknowledges that these words do not have settled meanings but, nonetheless, he offers a sense in which the words should be understood. Early in *On War*, von Clausewitz notes that knowledge and ability (or *doing*) are quite different things and the two ideas should never be confused with one another. Books cannot really teach us to do anything. The *doing* to which von Clausewitz refers has a deep sense that transcends mere mechanical performance. The term “art” should be reserved for activity whose object is “creative ability.” In contrast, the General uses the term “science” for those disciplines whose object is pure knowledge. As an exemplar of art he gives us architecture and as exemplars of science he offers mathematics and astronomy. The reader should note that in the two major translations of *On War* the editors and translators have chosen different words to express von Clausewitz’s object, or end, of art. Howard and Paret use the term “creative ability” as the defining

term while Colonel Graham uses the term “doing” in his earlier translation. The senses of these defining terms differ one from the other but each can clearly be seen as distinct contrasts to pure knowledge (science). Each of the terms for art offers some advantage for understanding von Clausewitz’s distinction between art and science. The discussion in this dissertation will use both “creative ability” and “doing” for the defining concepts inherent in art. Although the Graham translation appears to be somewhat dated, the language used by Graham is contemporaneous with language that Dewey might have used and, in some senses, will offer an advantage for later comparisons of Dewey and von Clausewitz. Specifically, the word “doing” is critical in understanding the role of experience in Dewey’s aesthetics while a similar understanding of von Clausewitz’s experiential demands in war are equally well understood as an outcome of “doing.”

Von Clausewitz is not so naïve as to believe that art and science are totally separable. He readily acknowledges that all art encompasses certain scientific demands and that all science requires some artistic acumen. “The reason is that, no matter how obvious and palpable the difference between knowledge and ability (doing) may be in the totality of human achievement, it is extremely difficult to separate them entirely in the individual.” (HP: 148) (Parenthetical added) Von Clausewitz takes as a given that all thought is art. When the premises that are generated from perceptions, or sense data, cease and judgments begin based on those percepts, that is the beginning of art. The mind,

too, perceives and such perception constitutes judgment as well; hence, that is also an art. “In brief, if it is impossible to imagine a human being capable of perception but not of judgment or vice versa, it is likewise impossible to separate art and knowledge altogether. The more these delicate motes of light are personified in *external forms* of being, the more will their realms separate. To repeat, creation and production lie in the realm of art; science will dominate where the object is inquiry and knowledge. It follows that the term “art of war” is more suitable than “science of war.” (HP: 148-149)

Further explanation shows that the General believes any attempt to strictly view war as solely art or science is misleading. He cautions that history has taught us that any attempt to pigeonhole war as either art or science, when in fact war is neither, often leads to an incorrect categorization of war and has given us many false analogies. Attempts to call war a “craft” has lead many analysts even farther afield because one presumes a craft to be some inferior sort of art—as if a craft can even legitimately be viewed as art at all. As Dewey addressed this issue in *Art as Experience* when he described the aesthetic nature of experience and suggested that all human endeavors, if engaged in the correct way with the environment, constitute an aesthetic experience or art. What, however, does the General suggest is the solution to this nominative quandary?

The way out is to understand that war does not belong to either the arts alone or to science alone but more appropriately war is an innate part of mankind’s social existence. The only difference between war and other social

conflicts such as business or politics is that war involves violence and bloodshed. War, in its essence, is still a matter of “intercourse of the human race” (OW: 202) or part of the social interaction of mankind. War is essentially different from those other mechanical or fine arts of mankind in that war does not exert itself against inanimate matter or passive objects “but against a living and reacting force.” (OW: 203)

In war, the will is directed at an animate object that *reacts*. It must be obvious that the intellectual codification used in the arts and sciences is inappropriate to such an activity, At the same time it is clear that continual striving after laws analogous to those appropriate to the realm of inanimate matter was bound to lead to one mistake after another. Yet it was precisely the mechanical arts that the art of war was supposed to imitate. The fine arts were impossible to imitate, since they themselves do not have sufficient laws and rules of their own. So far all attempts at formulating any have been found too limited and one-sided and have constantly been undermined and swept away by the currents of opinion, emotion and custom. (HP: 149)

Any attempt to codify war through analogy to any science or art is doomed to fail. What is required, according to the General, is an inquiring mind. Put differently, the *military genius* must be always engaged with his or her surroundings and must be immersed in every experience presented. Without this total involvement in the moment, no credible way exists for the experiences of war to build the foundation for future action.

Von Clausewitz claims, “in war, as in life generally, all parts of a whole are interconnected and thus the effects produced ... must influence all subsequent military operations and modify their final outcome to some degree, however

slight. In the same way, every means must influence even the ultimate purpose. ... In the same way, a means must be evaluated, not merely with respect to its immediate end: that end it self should be appraised as a means for the next highest one; and thus we can follow a chain of sequential objectives until we reach one that requires no justification, because its necessity is self-evident. ... Every stage in this progression obviously implies a new basis for judgment.” (HP: 158-159) Every decision or experience is a foundation for future experiences and decisions. The inquiring mind of the commander and leader is immersed in a continuing chain of experience that sets the stage for future action. The chain of experience is never broken. All action is bedding for later action.

To internalize and potentially optimize the effects of any given action in the tactical or strategic realm requires not a scientific analysis of the action but, rather, an ability to significantly extract the “lessons” of that experience. This ability to unrelentingly become immersed in the experience of war creates the journey that the *military genius* must travel if he or she is going to be capable of the highest deeds and performance necessary to lead an army to victory and secure a peace for the state. To extract the essence of the experience involves not just the *knowing* of the situation, or rather the “facts of the case,” but more importantly the commander must be plunged into the *doing* of the situation. Only by active involvement can the commander *do* the right action to secure a positive outcome. The *doing* is effectively the creative ability to use the

experience at hand, not only for a positive result for the action at hand, but to ensure what can be gained in order to set best footing for future experiences. This requisite creative ability is what led von Clausewitz to earlier assert that war is, most likely, more akin to an art than a science.

Pedagogical Value of Moral Virtue

Von Clausewitz does not specifically describe the educative quality of war. Unlike Dewey, who has a well-developed philosophy of education, the General touches on education in terms of requirements for training an army. His seemingly cursory discussion of training becomes scaffolding on which to hang a well-reasoned pedagogical concept. In Book III, Chapter III, von Clausewitz returns to his previous discussion of the moral elements of war. These moral virtues constitute the most important aspects of war and are among the driving factors that give life to the opposing forces of the engagement. These moral forces make up the spirit that is endemic in war and is the motivating force of the will that “moves and leads the whole mass of force, practically merging with it, since the will is itself a moral quantity.” Further, these moral forces are not subject to analysis or “academic wisdom,” as the General notes, but these forces must be “seen or felt.” (HP: 184) Only through this understanding can the reader see the role of these forces in experience. Von Clausewitz describes any attempt to lay down rules and principles of war without taking moral values into account as a “miserable” or “paltry” philosophy. He is reminding us that these moral values are the forces that give armies, countries, and commanders

their reactive abilities that make war more than a clash of mechanical or quantitative bodies or forces. Put simply, rules and principles cannot work in an environment of change. When prosecuting a war “by the book” the moral forces of both sides react in such a way as to make “the book” obsolete and unusable from the very opening of hostilities. The only effective resort is an appeal to *military genius*, which, the General reminds us, is above the rules. Or, as he effectively claims, this appeal to genius “amounts to admitting that rules are not only made for idiots, but are idiotic in themselves.” (HP: 184)

The principal moral elements to which von Clausewitz refers are “*the skill of the commander, the experience and courage of the troops, and their patriotic spirit.*” (HP: 186) He claims that all are interrelated and we would be mistaken to rate any one of them as dominating. For the purposes of this dissertation the emphasis is placed on the commander but, as is evident, the commander’s place is only secure when fixed to the army, the state, and the citizenry. A signal point of the effective commander is his or her ability to impart and maintain an *esprit* among the troops—an enthusiasm for the tasks at hand. Per the General:

War is a special activity, different and separate from any other pursued by man. ... An army’s military qualities are based on the individual who is steeped in the spirit and essence of this activity; who trains the capacities it demands, rouses them, and makes them his own; who applies his intelligence to every detail; who gains ease and confidence through practice, and who completely immerses his personality in the appointed task. ...

An army that maintains its cohesion under the most murderous fire; that cannot be shaken by imaginary fears and resists well founded ones with all its might; that, proud of its

victories, will not lose the strength to obey orders and its respect and trust for its officers even in defeat; whose physical power, like the muscles of an athlete, has been steeled by training in privation and effort; a force that regards such efforts as a means to victory rather than a curse; that is mindful of all these duties and qualities by virtue of the single powerful idea of the honor of its arms—such an army is imbued with the true military spirit. (HP: 187-188)

When an army lacks spirit, effective training and leadership ability befall the commander to assuage this deficit. If military spirit in the army is poor, or missing, that shortfall must be made up by the commander's leadership qualities.

Von Clausewitz adamantly proclaims there are only two ways that this spirit can be imbued: foremost by a series of victories and, if conditions of war are absent, continuous training in an environment requiring the utmost exertion by the forces. Anything short of these two methods is incapable of demonstrating to the soldiers their true capabilities. Said another way, anything less than actual combat experience, or realistic training that pushes the individual to extremes, will not let the soldier or the commander know his or her limits. A general can depend only on those troops with whom he or she has shared hardships and dangers. "In short, the seed will grow only in the soil of constant activity and exertion, warmed by the sun of victory. Once it has grown into a strong tree, it will survive the wildest storms of misfortune and defeat, and even the indolent inertia of peace, at least for a while. Thus, this spirit can be *created* only in war by great generals, though

admittedly it may endure, for several generations at least, even under generals of average ability and through long periods of peace.” (HP: 189)

The major import to be gleaned from this is that the spirit of the army depends on an “education” that can only be learned from actual experience. The commander is the “teacher” and must have developed his or her skills through continued experience in combat and statesmanship. That is, the experience must be *real* and continuous if leadership and “pedagogical effectiveness” is realized.

A brief reprise of the requirements for *military genius* shows that the genius is a rare individual who can only attain the lofty goal of commander-in-chief through a succession of appropriate experiences. The experiences demanded by von Clausewitz fit well with an inquiring mind rather than a creative one and a comprehensive view rather than a specialized or narrow one. Further, he demands of the genius a “calm rather than excitable head to which in war we would choose to entrust the fate of our brothers and children, and the safety and honor of our country.” (HP: 112)

War, in a pure sense, must continually add manpower and materiel to respond to an adversary’s actions. This indicates war, theoretically, is an action of extremes. In reality, war is subject to the many foibles of mere existence—uncertainty, probability, poor information, personal traits and characteristics, chance, luck, and the like. In this milieu, war is changed from the absolute and the seemingly inevitable push toward extremes to action in the sense of a game;

that is, the successful military commander must deal with living and, what von Clausewitz calls, *moral* forces. Hence, war can never attain “the absolute and the positive.”

These moral forces of the commander lead to moral virtues such as courage and self-reliance. Moral action enables the commander to successfully deal with the accidental and the improbable. That is, the successful commander, or *military genius*, becomes capable only through experience with the fog and error created by imperfect knowledge, uncertainty, chance, and shifting probabilities. The essence of this genius “consists of every common tendency of the powers of the mind and soul toward the business of War; there must be a *harmonious association* of powers.” All the moral powers or virtues—intellect, courage, strength of body and mind, logical reasoning, *coup d’oeil*, among others—are required of the military genius. For Clausewitz, the military genius can only develop through a continuous and continuing *process* inherent in the actual experience of war. Only through a process of immersion in war, and doing that which is required to understand all of the vagaries of combat, can a commander become the military genius. This parallels Dewey’s description of the *process* required for the aesthetic experiences demanded for the *live creature*.

Von Clausewitz describes war as movement in an atmosphere of four elements: danger, physical effort, uncertainty, and chance. To deal with these elements requires great force of mind and understanding; only a commander’s *force of will* can overcome troop resistance to these forces. The commander’s

strength of character can only be manifest through *habit*. Only through immersion in the *experience* of war can the genius develop. War offers continual resistances, which von Clausewitz calls friction, to all the activities of combat—both in the actual execution as well as the strategic development of the entire war effort. Since war is always fought for political purposes, the military genius must in fact be a statesman in addition to being a strategist and operational expert. All these roles can only be developed through the understanding garnered through experience.

Theory is of marginal use for von Clausewitz. Since attempts at theory are only valuable analytically, theory cannot provide the commander with an epistemic or ontological grounding for war. The world of war is only synthetic and all decisions made theoretically are bound to become valueless or inadequate with the onset of actual hostilities. When intelligent and living forces engage one another as adversaries, all attempts at theory lose their force and effectiveness. Only a military genius—with an existential basis in actual experience—can adequately react to and understand the changing nature of the environment and action in which he or she is engaged. This applies to the realm of physical combat as well as to the political and strategic levels of the war effort. For the *military genius*, experience replaces theory as the operative factor determining the success of the war.

Von Clausewitz delves deeply into the conceptual understanding of war and asks whether war is an art or a science? While acknowledging that the exact

meaning of both concepts is unsettled, he conceptually separates the two ideas. Science is *knowing* and art is *doing*. This is critical to fully grasping von Clausewitz's understanding of war. Art is the carrying out of some action. In art only does the individual build and create. The individual interested in simply knowing something is engaging in science, but the individual committed to making something—or making something happen—is engaging in art. Von Clausewitz acknowledges that the two areas are often intertwined or overlap. For the military genius to fully understand the total environment of war, art must predominate if victory is to be achieved. Showing the nature of the two concepts as they affect the war effort, von Clausewitz extends the idea by saying war is neither completely an art or a science but belongs to the “province of social life.” In this way he says that war not only involves the entire community for which the war is being fought, but also that war involves a purpose of great interest—state policy. Since at all levels war is an activity of the will that exerts itself on both material things and living, reacting forces, war is different than either science or art.

CHAPTER IV

DEWEYAN RETROSPECTIVE ON VON CLAUSEWITZ'S PHILOSOPHY

Cambridge philosopher, W. B. Gallie, characterizes von Clausewitz's connection to 20th century pragmatic philosophy as follows:

It seems to me that whether these words (of von Clausewitz) were prefixed to a treatise on war or peace—or on law or on rhetoric or on logic or mathematics or economics or engineering or navigation—no one with a the slightest acquaintance with philosophy could fail to suspect that the author was a man of marked philosophical ability. They display the comprehensive view, the poise, the slightly ironic self-awareness, the modesty and assurance that are necessary to any work of value in that field. They are the words of a man who knows very well what he is about, and yet so little—and at best one-sidedly—he can convey that knowledge. Above all they suggest a man who realizes to what extent any thinker is in the hands of his work, that *his* best work is when *it* takes over, and that his main duty is to ensure that this happens as often as possible. Which suggests a genuine, if not a great, philosopher.

What, then, were Clausewitz's main contributions to philosophy? They were naturally of a limited kind; but they would have been very much appreciated by Aristotle, and, oddly enough, by some of the ablest philosophers of our century. One could say, in the current jargon, that they were centered on the *idea* of *practice* and its application for the social science in general. (42)

Gallie is prescient in citing the General as “a genuine, if not a great, philosopher.”

His assessment of von Clausewitz's philosophy as centered on practice and the social aspects of living is certainly correct. If the tie to Dewey's philosophy is as strong as this dissertation indicates, then von Clausewitz's “main contributions to philosophy” transcend being as “of a limited kind.” Dewey and von Clausewitz

both directed their philosophical thought to life in the *actual* world as opposed to an abstract ideal with little value for life as lived.

Previous chapters limned the thought of the two great philosophers, through their respective concepts of experience. Having elucidated the similarity of their thoughts concerning the development of the complete individual, the “flourishing person” can now be explored. Experience for both men is central to their philosophical thought. The strong association between the thought of Dewey and von Clausewitz can be gleaned by identifying the common threads that pervade their philosophies and clarifying how each philosopher used them to build a philosophical “whole.” Those “wholes” for each philosopher result in two separate but are conceptually similar philosophies. To illustrate these threads that make up the tapestry of each philosophy, several specific concepts, inherent in the philosophy of each man, should suffice to demonstrate the exceptionally strong linkage between the two philosophers. The concepts are:

- (1) The *aesthetic*
- (2) *Continuity*
- (3) *Uncertainty* and *friction*; the *organism*
- (4) *Theory* and *practice* (or the *abstract* and the *real*)
- (5) *Art* and *science*
- (6) *Existence* as a *social construct*
- (7) The *live creature* and the *military genius*

Each concept, or thread, builds toward a complete philosophical structure for both Dewey and von Clausewitz. When the edifice is complete the similarity between the two philosophies is evident. To establish these various connections, the reader will recognize that none of the individual threads stands alone. Each thread overlaps with others and the concepts often include subtexts from other threads. Nonetheless, separating the threads allows for a construct from which to understand the connections between the two philosophies. Once the similarity is established, one further question suggests itself, namely, “Do these philosophies have value in today’s modern world, especially, in the context of contemporary war?” This chapter lays the foundation for addressing this important query.

The Aesthetic

Dewey’s aesthetics have been fully elucidated in Chapter II. The purpose in this section is to winnow those concepts that will lead to the aesthetic understanding required of those individuals who are “alive” in the world. Dewey hopes to “recapture” the appreciation that man “lost” by becoming “modern or civilized.” His contention is that the aesthetic nature of man is something that should be *lived* in all of his or her experiences not simply in the supposed appreciation of art as understood and promulgated by a cadre of “experts” or critics. Aesthetic appreciation inheres in every individual and, correctly understood, is a journey and not a destination.

Art, for Dewey, is an exemplar of how the aesthetic experience is to be understood. The aesthetic journey should be of the same type in an artistic experience, or appreciation, as is the aesthetic journey in the everyday act of living. This, Dewey laments, is not always the case. Early man enjoyed the aesthetic in all that he or she did because all experiences focused on existence; therefore, those experiences had to lead to a more intimate understanding and appreciation of nature and the environment. If one wanted to survive, the maximum survival benefit had to be extracted from all interactions with the world. Modern man does not have the same existential requirements as did his or her predecessors. The aesthetic journey, thus, is now limited to the “appreciation” of objects rather than to experience itself. Effectively, for the ancient man and woman *life* was art. In the modern world by *things* have become art. Today’s art is not part of the lived experience but is removed from the everyday and placed on a pedestal. This does not diminish the importance of appreciating the aesthetic *process* as the mode of immersing one’s self into the act of being or becoming. For Dewey the aesthetic is having experiences in the “right” way.

For von Clausewitz the *process of becoming* is not couched in the realm of art but, rather, in the environs of war. The process of becoming the master of war, the *military genius*, is akin to Dewey’s process of aesthetic appreciation. Von Clausewitz claims that the only way a genius can develop is through experience properly understood. The proper understanding, as this section demonstrates,

is seen as a precursor to Dewey's conception of the aesthetic. Von Clausewitz's *military genius* acts as an archetype of Dewey's *live creature*. Each philosopher viewed experience as the grounding of the individual and one's engagement with experience determines the degree to which the individual can become what he or she potentially can be. Even though the process of experience for each philosopher is discussed in disparate spheres, analysis reveals the processes themselves are almost indistinct from one another. For both philosophers the *way* in which one undergoes an experience determines the aesthetic and, in the end, the existential status of every individual.

Dewey claims that art is not to be separated from life. The aesthetic deals with how events are perceived in experience. Art for Dewey is not a separate realm but is inherent in all we do and requires a certain approach to experience that does not cut the individual off from direct and immediate association with human effort—the undergoing and doing of the one who experiences and the environment or object of that experience. (AE: 2) Von Clausewitz says something quite similar when he says, “Every action needs a certain time to be completed. The period is called its duration, and its length will depend on the speed with which the person acting works. ... Everyone performs a task in his own way; a slow man, however, does not do it more slowly because he wants to spend more time over it, but because his nature causes him to need more time. If he made more haste he would do the job less well.” (HP: 82) For both of these views, we see that aesthetic experience requires immersion and complete

undertaking. Von Clausewitz is already indicating the need for experience to reach a satisfactory conclusion if that experience is to be appropriately undergone. This completion at which he hints is the consummation required in Dewey's aesthetic scheme described earlier.

Aesthetic understanding, per Dewey, must start not with an object but rather with the conditions—"the soil, air, and light"—from which the object arose. These *conditions* must be appreciated if any aesthetic experience is to reach fruition. (AE: 11) This is precisely the point that von Clausewitz made, years earlier, in his claim that the *military genius* must develop a sense of battle that can only be garnered from the maelstrom of actual combat. From this fog, only an intimate interaction with all the conditions of battle can prepare the future commander to properly understand the lessons necessary to engage successfully in prospective positions of ever increasing responsibility and leadership. Fulfilling the requirement for the "proper" kinds of experience at all levels of war is what allows for the development of the highest levels of command. This view is a narrower description of Dewey's concept of *an* experience as a constant interaction of the individual with the environment until a consummation is reached. That consummation acts, not as a fixed completion, but as a launching pad for future experience. In discussing this interaction, Dewey appears to have paraphrased von Clausewitz in his discussion of a commander's development of his or her sense of a combat engagement, or an entire war. "The first great consideration is that life goes on

in an environment; not merely *in* it but because of it, through interaction with it. ... At every moment the living creature is exposed to dangers from its surroundings, and at every moment, it must draw upon something in its surroundings to satisfy its needs. The career and destiny of a living being are bound up with its interchanges with its environment, not externally but in the most intimate way.” (AE: 12) This aesthetic appreciation of man in everyday life is the same aesthetic appreciation of the soldier in combat. The proper appreciation of the aesthetic experience is what leads to the full development of the individual.

At this juncture, a question is evident. If all persons have “experiences,” what suggests that, in any given environment, all people experiencing that environment are not undergoing similar *aesthetic* understanding? Why do not all individuals listening to a Mozart opera have a similar appreciation for the work or why did not all participants in the Battle of Antietam have the same appreciation for what was to be learned and understood from that battle? Two possible replies seem apparent. First, at any single event the environment is different for every individual so the “experience” must perforce be unique to the individual. Second, while the environment may be different for each individual, the similarities allow for an aesthetic interpretation by all, or most, of the persons experiencing that “event.” If this is the case, differences in the quality of the aesthetic experience has to be explainable by the different ways the experience itself is undergone by each individual. Since both of these

explanations appear plausible, a reasonable presumption would be that an interplay between the individual and the environment is “in play” in all experiences and the “strength” or “quality” of that interaction is what, in fact, determines the aesthetic nature of the event. This interaction is what Dewey posits as the continuing cycle of doing and undergoing that culminates in a consummation of the aesthetic experience. “Experience is the result, the sign, and the reward of that interaction of the organism and environment which, when it is carried to the full, is a transformation of interaction into participation and communication.” (AE: 22) This “participation and communication” when “carried to the full” is the defining mark of the aesthetic.

Von Clausewitz shares this view—a view integral to the character of the *military genius*. Before expanding on the development of the *genius*, it is sufficient to note von Clausewitz believed a prerequisite for the highest positions of command is the ability to see and understand the total environment of war, at all levels, from the individual engagements to the goals and ends of state policy. Only a keen intellect immersed in a continuing doing and undergoing of the “right” experiences can achieve this understanding. The importance of the aesthetic experience is the demand for a continuing tension between the individual and his or her environment until nothing more can be gleaned from the interaction. This requires not only a particular acumen but also an intense desire for the experience. The difference between “doing a job” and being a *live creature* or *genius* in any occupation is the approach employed.

That approach is determined by the distinctive caliber of previous experiences. Dewey explains, "Compartmentalization of occupations and interests brings about separation of that mode of activity commonly called 'practice' from insight, of imagination from executive doing, of significant purpose from work, of emotion from thought and doing. ... Those who write the anatomy of experience then suppose that these divisions inhere in the very constitution of human nature." (AE: 21) For most people, experiences are actions undergone amidst a scheme of separation and are rarely understood within the framework of their intrinsic meaning. Only the few, the aesthetic persons, can have *an* experience that results from full immersion in the cycle of undergoing and doing. *Commitment* to the experience is the foundation of the aesthetic and differentiates *an* experience from mere experience.

Dewey asserts that the "truth" can never be known by simple consecutive reasoning and that all philosophical reasoning can only arrive at the goal by putting aside numerous objections. "Does not the reasoner have also to trust to his 'intuition' to what come upon him in his immediate sensuous and emotional experiences, even against objections that reflection presents to him. ... Ultimately there are but two philosophies. One of them accepts life and experience in all its uncertainty, mystery, doubt, and half-knowledge and turns experience upon itself to deepen and intensify its own qualities—to imagination and art." (AE: 34-35) This states precisely von Clausewitz's philosophy of *military genius*. The deepened and intensified understanding, manifest in his

concept of *coup d'oeil*, enables the successful commander (at the highest levels) to see war as *an* experience and an aesthetic endeavor. Recall briefly, *coup d'oeil* refers to the commander's "inner eye," the ability to partake and understand the entire environment of war appropriate to his or her position. At the highest levels, this requires intimate familiarity with all phases of battle, both strategic and tactical, as well as the requirements of state policy. This familiarity can only be seen as aesthetic, fitting the rubric of Dewey's concept of the aesthetic as experiences appropriately undergone—a continuum of rhythmic ebbs and flows made of cycles of doing and undergoing—reaching consummation, only to serve as the launching point for new experience.

In art, the aesthetic guaranteed for Dewey the continuing interaction of the individual with the object being considered in its ever-shifting environs. The cycle continues until nothing more can be had; consummation results in a temporary stability. Now a new basis for consideration nears and with an ever so slight change in the environment a new aesthetic cycle begins. For von Clausewitz, the same occurs in war. He tells us that his rhythmic demand for new experience serves as the only trail that can lead to success for the *military genius*. Therefore, war becomes aesthetic in the Deweyan sense. The soldier-philosopher, J. Glenn Gray, in his classic, *The Warriors; Reflections on Men In Battle*, describes war in purely aesthetic terms. Referring to the havoc and terror of a shelling of the French Riviera on August 25, 1944, he says,

When I could forget the havoc and terror that was being created by those shells and bombs among the half-awake inhabitants of the villages, the scene was beyond all question magnificent. ... Many former soldiers must be able to recall some similar experience. ... As far as I am concerned, at least part of that satisfaction can be ascribed to delight in *aesthetic* contemplation.

As I reflect further, it becomes clear, however, that the term "beauty," used in any ordinary sense, is not the major appeal to such spectacles. Instead, it is the fascination that *manifestations of power and magnitude have for the human spirit*. ... Fleeting as these rapt moments may be, they are, for the majority of men, an escape from themselves that is very different from the escapes induced by sexual love or alcohol. This raptness is a joining and not a losing, a deprivation of self in exchange for a union with objects that were hitherto foreign. Yes, the *chief aesthetic appeal of war surely lies in this feeling of the sublime*, to which we, children of nature, are directed whether we desire it or not. *Astonishment and wonder and awe* appear to be *part of our deepest being*, and war offers them an exercise field par excellence.

Perhaps the majority of men cannot become so absorbed in a spectacle that they overcome fear of pain and death. ... If ever the world is blown to bits by some superbomb, there will be those who will watch the spectacle to the last minute, without fear, disinterestedly and with detachment. I do not mean that there is lack of interest in this disinterestedness or lack of emotion in this detachment. *Quite the contrary. But the self is no longer important to the observer; it is absorbed into the objects with which it is concerned.* (35-36) (Emphasis added)

Gray's description assuredly captures the spirit of both Dewey's and von Clausewitz's conceptual framework of experience. The correct interpretation of experience, while most certainly aesthetic, demands absorption of the viewer by the environment. This absorption transcends the self and makes the experience *an* experience.

Von Clausewitz asserts the only way for an experience to have worth is as part of a thread, or tapestry, of continual, victorious battles or the most realistic training. The imputation of this view demands that only by a series of meaningful actions or experiences can the stage be set for the increasing development of the commander as he or she moves from foot soldier to commander-in-chief. Theory and study are not sufficient to develop the leader or commander. Full immersion in the environment of interest provides the only mechanism wherein the traits and attributes can be generated. Aesthetic experiences—as conceived by Dewey—in actual combat and positions of state policymaking are the genesis of, and framework for, the fully developed *military genius*. This concept parallels Dewey's picture of the aesthetic development needed to become a *live creature*.

Von Clausewitz and Dewey also share the sense that thinking corresponds to an aesthetic endeavor. This is important because for an individual to reach his or her acme of potential he or she must be able to think clearly and correctly within his or her environment. Thinking, as Dewey explains, requires not only intellectual but emotional effort. Likewise the process fosters volitional and goal oriented or purposive. Thinking is a train of ideas, both emotional and practical, that are not separate from one another but part of a complete whole. "We say of an experience of thinking that we reach or draw a conclusion. Theoretical formulation of the process is often made in such terms as to conceal effectually the similarity of 'conclusion' to the consummating phase of every developing

integral experience.” (AE: 39) Of course, this “integral experience” is nothing more than Dewey’s rhythmic cycle of doing and undergoing or, succinctly put, *an* aesthetic experience.

Dewey further links thinking to the aesthetic. He expatiates on the concept as follows:

Hence *an* experience of thinking has its own esthetic quality. It differs from those experiences that are acknowledged to be esthetic, but only in materials. The material of the fine arts consists of qualities; that of experience having intellectual conclusion are signs or symbols having no intrinsic quality of their own, but standing for things that may in another experience be qualitatively experienced. The difference is enormous. ... Nevertheless, the experience itself has a satisfying emotional quality because it possesses internal integration and fulfillment reached through ordered and organized movement. In so far, it is esthetic. (AE: 39-40)

Von Clausewitz holds a view of thinking that seems a precursor to the Deweyan concept of thought. Describing the requisite intellectual abilities of the successful commander (*military genius*), the General is clear on the aesthetic quality of thinking.

One more requisite remains to be considered—a factor more vital to military knowledge than to any other. Knowledge must be so absorbed into the mind that it almost ceases to exist in a separate, objective way. In almost any other art or profession a man can work with truths he has learned from musty books, but which have no life or meaning for him. Even truths that are in constant use and are always to hand may still be externals. ... It is never like that in war. Continual change and the need to respond to it compels the commander to carry the whole intellectual apparatus of his knowledge within him. He must always be ready to bring forth the appropriate decision. By total assimilation with his mind and

life, the commander's knowledge must be transformed into a genuine capability. ...

A book cannot really teach us how to do anything, and therefore "art" should have no place in its title. ... It is therefore consistent to keep this basis of distinction and call everything "art" whose object is creative ability, ...

Of course all thought is art. The point where the logician draws the line, where premises resulting from perceptions end and where judgment starts, is the point where art begins. But further: perception by the mind is already a judgment and therefore an art; so too, in the last analysis, is perception by the senses. In brief, it is impossible to imagine a human being capable of perception but not of judgment or vice versa, it is likewise impossible to separate art and knowledge altogether. The more these delicate motes of light are personified in *external forms* of being, the more will their realms separate. (HP: 147-148)

Art, as described by von Clausewitz, is almost a direct parallel to Dewey's description of the aesthetic experience. We see that the General claims war is a milieu of continual change demanding a continual response from the service member. This is akin to Dewey's requirement of a constant doing and undergoing for an experience to qualify as aesthetic. Von Clausewitz portrays knowledge as something that must "be so absorbed into the mind that it almost ceases to exist in a separate, objective way." This description differs little from Dewey's claim that thinking, "has a satisfying emotional quality because it possesses internal integration." The General states his case by asserting thinking is "of course" an art. Art for von Clausewitz is the aesthetic. (This idea is expanded in his discussion of war as social.) Dewey, as stated above, tells us that thinking is, indeed, aesthetic. "Nevertheless, the experience itself has a

satisfying emotional quality because it possesses internal integration and fulfillment reached through ordered and organized movement. In so far, it is esthetic.” (AE: 40)

The aesthetic, for both von Clausewitz and Dewey, is the very nature of experience undergone in such a way as to completely involve the individual and the environment. This intimate and precarious connection between being and nature, in constant struggle with one another, each reacting with and changing the other until stability and consummation is reached, is the essence of *an* experience. This ongoing cycle of action and reaction, stopping and starting, is the aesthetic.

An incomplete cycle of doing, undergoing, and consummation is one of anesthesia. The individual no longer develops, cannot flourish, and is incapable of being a *live creature* or *military genius*. The words of both philosophers are uncannily similar; their metaphors are inter-changeable. For Dewey, “(W)hen excitement about the subject matter goes deep, it stirs up a store of attitudes and meanings derived from prior experience. As they are aroused into activity they become conscious thoughts and emotions, emotionalized images. To be set on fire by a thought or scene is to be inspired. What is kindled must either burn itself out, turning to ashes, or must press itself out in material that changes the latter from crude metal into a refined product.” (AE: 68) For von Clausewitz, “The effects of physical and psychological factors (the environment and the individual) form an organic whole which, unlike a metal alloy, is inseparable by

chemical processes. ... Hence most of the matters dealt with in this book are composed of equal parts of physical and of moral causes and effects. One might say that the physical is little more than the wooden hilt, while the moral factors are the precious metal, the real weapon, the finely-honed blade.” (HP: 184-185) (Parenthetical added)

Aesthetic experience, per Dewey, results from *all* meaningful experiences previously undergone. We are capable of having *an* experience only as a consequence of the nature as determined by earlier experience. An individual may never *know* how earlier experiences will shape future experiences but each experience serves as bedding for new, aesthetic experiences. Experiences are beginnings, often hazily formed, for the new and novel. This inchoate nature of experience has been well characterized by McDermott as follows:

Taking these phases now in turn, what can we say of the inchoate as characteristic of our aesthetic sensibility? We carry each with us, subcutaneously, as Dewey would say, *all* of our experiences ever undergone. To retrieve them we have obvious activities, such as memory, and more determined attempts, such as retrospection. We are also subject to flashbacks, startling intrusions from our past into our present consciousness. At times, we can trace the relational netting that gave rise to these eruptions but at other times their origins are vague, unknown, as if they were self-propelled from our past into our present. What is startling and pedagogically crucial about our experience of the inchoate is that when it makes its appearance in our consciousness, we realize the originating power and the surprising novelty of experiences we once “had” and yet of which we were unaware in our daily consciousness. (2007: 232)

Von Clausewitz would certainly agree with this observation but would most likely argue that experiences in war should be sought as often as possible in order to “train” or “teach” the future genius for the certain and sure unique experiences he or she will face in future combat. That he understands the pedagogical value and nature of experience is clear.

The actions of Colonel Joshua Chamberlain is a prime example of the inchoate making “its appearance in our consciousness” as a result of “the power and surprising novelty of experiences we once ‘had’ and yet of which we were unaware.” Colonel Chamberlain, at the Battle of Gettysburg, made one of the most daring counter charges in the history of warfare. Many military historians credit the Colonel as the decisive factor in ensuring the Union victory. Charged with defending the extreme southern flank at Little Round Top, Chamberlain and his 20th Maine Infantry, were in fierce combat with the 15th Alabama Infantry. During this intense firefight, the Confederates began to turn the flank, while the Union forces were quickly depleting their stocks of ammunition. Chamberlain realized that if the Alabamians succeeded the entire Northern lines would fall. To use von Clausewitz’s terminology, Chamberlain’s *coup d’oeil* enabled him to see the “big picture” in through the miasma of combat and the fog of war. Even though struck by a bullet in the thigh (he was saved by his sword which deflected the missile), the Colonel ordered his men, who were without ammunition, to begin a charge against the enemy. This is a prime

example of von Clausewitz's demand for determination and resoluteness once a decision is made. In Colonel Chamberlain's own words,

Not a moment was about to be lost! Five minutes more of such a defensive and the last roll call would sound for us! Desperate as the chances were, there was nothing for it but to take the offensive. I stepped to the colors. The men turned towards me. One word was enough- "BAYONETS!" It caught like fire and swept along the ranks. The men took it up with a shout, one could not say whether from the pit or the song of the morning sat, it was vain to order 'Forward!' No mortal could have heard it in the mighty hosanna that was winging the sky. The whole line quivered from the start; the edge of the left-wing rippled, swung, tossed among the rocks, straightened, changed curve from scimitar to sickle-shape; and the bristling archers swooped down upon the serried host- down into the face of half a thousand! Two hundred men!

It was a great right wheel. Our left swung first, the advancing foe stopped, tried to make a stand amidst the trees and boulders, but the frenzied bayonets pressing through every space forced a constant settling to the rear. Morrill with his detached company and the remnants of our valorous sharpshooters... now fell upon the flank of the retiring crowd. At the first dash the commanding officer I happened to confront, coming on fiercely (with) sword in hand and big navy revolver (in) the other, fires one barrel almost in my face. But seeing the quick saber point at his throat, reverses arms, gives sword and pistol into my hands and yields himself prisoner.

Ranks were broken; some retired before us somewhat hastily; some threw their muskets to the ground- even loaded; sunk on their knees, threw up their hands calling out, "We surrender. Don't kill us!" As if we wanted to do that! We kill only to resist killing. And these were manly men, whom we could befriend and by no means kill, if they came our way in peace and good will. (Heiser: Web)

For his actions at Gettysburg, *The Lion of Round Top* as he was later called, was awarded the Medal of Honor. In April of 1865, General Ulysses Grant gave then brevet-Major General Chamberlain the honor of commanding the Union forces

at Appomattox in accepting the surrender of General Robert E. Lee's *Army of Northern Virginia*.

The example of Colonel Chamberlain illustrates the experiential concepts of both Dewey and von Clausewitz. From the Clausewitzian perspective, the Colonel not only had experienced many prior combat actions, which enabled him to have the right kind of experiences to engender a refined "inner eye." He not only had the sense of combat that required immediate action if he was to survive but he also saw the strategic, or political, implications of defeat. Loss not only meant defeat for the 20th Maine but also quite probably meant the loss of the Battle of Gettysburg as well. Such a loss would have had dire consequences for the Union. Instead, the battle marked a clear turning point in the war. From a Deweyan understanding, all of Chamberlain's prior experiences prepared him for the moment at Little Round Top. The inchoate nature of those experiences "erupted" on that fateful July day in 1863. Perhaps, as McDermott suggests, the nature of the inchoate of those experiences are not consciously knowable but, as Dewey asserts, all of the Colonel's prior experiences enabled him to take the bold actions required.

Continuity

The "aesthetic," as this dissertation uses the term, has as its generative kernel the concept of *an* experience, or, experiences properly had as a relation of the individual with his or her environment. Inherent in the aesthetic is the demand for *continuity*. The word 'continuity' has two senses for Dewey. In the

first sense, continuity means a re-establishment of the aesthetic with the practical; that is, to make clear that the real and pulsating world in which we live offers us the aesthetic in the very environment of life. In the second sense, continuity is a thread that binds all meaningful experiences together into a meaningful whole. In this sense, continuity enables the individual to meld experiences into a complete and unified set, thus, enabling that person to become Dewey's *live creature* or von Clausewitz's *military genius*. This brief section explicates the need for continuity in the aesthetic and, more importantly, how von Clausewitz's view of continuity exemplifies in a realistic and practical manner, and in all meaningful or properly undergone experiences, Dewey's demand for continuity.

At the beginning of *Art as Experience*, Dewey describes his philosophical task in terms of the restoration of the aesthetic as a re-establishment of the continuity between the cultural concepts of the fine arts (as archetypes of the aesthetic) with the practices of the actual world. Dewey clarifies the need for continuity, in the first sense of the word, as follows:

When artistic objects are separated from both conditions of origin and operation in experience, a wall is built around them that renders almost opaque their general significance, with which esthetic theory deals. Art is remitted to a separate realm, where it is cut off from that association with the materials and aims of every form of human effort, undergoing and achievement. A primary task is thus imposed upon one who undertakes to write upon the philosophy of the fine arts. This task is to restore the continuity between the refined and intensified forms of experience that are works of art and the everyday events, doings, and sufferings that are universally

recognized to constitute experience. Mountain peaks do not float unsupported; they do not even rest upon the earth. They *are* the earth in one of its manifest operations. It is the business of those who are concerned with the theory of the earth, geographers and geologists, to make this fact evident in its various implications. The theorist who would deal philosophically with fine art has a like task to accomplish.
(AE: 2)

Dewey's philosophical task is to make clear that the aesthetic is not merely something that operates apart from our place in the world. He notes that the aesthetic inheres in "everyday events, doings, and sufferings." Continuity, in this sense, becomes more clearly illuminated in the exposition of the role of theory as it relates to development of von Clausewitz's discussion of the military leader or commander. As Dewey puts it, "My purpose, however, ... is to indicate that *theories* which isolate art and its appreciation by placing them in a realm of their own, disconnected from other modes of experiencing, are not inherent in the subject-matter but arise because of extraneous conditions. ... Even to readers who are adversely inclined to what has been said, the implications of the statements that have been made may be useful in defining the nature of the problem: that of recovering the continuity of esthetic experience with normal processes of living." (AE: 9)

The major import in the above description of continuity is, simply, that all we do, if understood and undergone correctly, constitutes the aesthetic. The aesthetic is not relegated to objects or things apart from the relationship of the individual with the environment. This proper understanding—the cycle of

doing and undergoing—entails continuity as described in the second sense of the word. Chapter II offered a full explanation of Dewey's insight and awareness of the nature of the continuity of experience. Briefly, the individual and the environment continually interact and each changes as a result of that interaction. Once changed, the conditions appear as "new" and the interaction continues based on the renewed relationship between individual and environment. This cycle continues until a point of stability is established. This stability, or consummation as Dewey calls this temporary condition, is not to be confused with stasis or a fixed, unchanging relationship. Consummation, if the experience has extracted all that can be gained from the relationship of the individual and environment, has changed the individual in such a way as to form an incubator for understanding new and different experiences. Thus, consummation is not finality.

The individual now has formed a more complete foundation for interaction with novel environments and conditions which may arise whereas, heretofore, the full potential of the relationship of person and surroundings could never have been realized because the bedding was not set for the new conditions. Clearly stated, Dewey comments,

There is in nature, even below the level of life, something more than mere flux and change. Form is arrived at whenever a stable, even though moving, equilibrium is reached. Changes interlock and sustain one another. Whenever there is coherence there is endurance. Order is not imposed from without but is made out of the relations of harmonious interactions that energies bear to one another. Because it is

active (not anything static because foreign to what goes on) order develops. It comes to include within its balanced movement a greater variety of changes. ...

For only when an organism shares in the ordered relations of its environment does it secure the stability essential to living. And when the participation comes after a phase of disruption and conflict, it bears within itself the germs of a consummation akin to the esthetic. (AE: 13-14)

One must, for maximal discernment, mastery and appreciation of any and all experiences, have set the bedrock underpinnings in place by having had previous meaningful experiences that allow for an understanding of the new.

Von Clausewitz makes this clear in his exposition on developing the commander-in-chief—the *military genius*. While the terms the General employs to describe the requisite experiences necessary for one's evolution into the consummate leader are not those of Dewey, conceptually the *process* of the *genius's* development fits the Deweyan paradigm. *Coup d'oeil*, the "inner eye," (discussed in Chapter III) is the ability to see the battle and the war as it unfolds with all the uncertainties and the possibilities that are offered. Only through previous experience of the appropriate kind can the battlefield commander or the commander-in-chief develop this "inner eye." Von Clausewitz is explicit in his demand for *real* and *continued* experience as the bedrock for preparation for victory. When citing the requirements for the spirit of a victorious army, he says,

There are only two sources for this spirit, and must interact in order to create it. The first is a series of victorious wars; the second, frequent exertions of the army to the utmost limits of its strength. Nothing else will show a soldier the full

extent of his capacities. The more a general is accustomed to place heavy demands on his soldiers, the more he can depend on their response. A soldier is just as proud of the hardships he has overcome as of the dangers he has faced. *In short, the seed will grow only in the soil of constant activity and exertion, warmed by the sun of victory. Once it has grown into a strong tree, it will survive the wildest storms of misfortune and defeat, and even the indolent inertia of peace.* (HP: 189) (emphasis added)

Von Clausewitz saw quite clearly that constant exposure and involvement in the experiences of war was a necessary condition for successful undergoing of the new and uncertain experiences that actual combat would offer. Without prior experiences of the “right” nature an army will disintegrate in the caldron of fighting. For a commander-in-chief lacking the necessary range of experience in both warfare and statecraft, the entire war may be lost. Experiences must be constantly renewed and understood based on the foundation of the constant struggle undergone by the military leader in previous *actual* combat. Failing the opportunities for actual combat, von Clausewitz demands that training must be realistic, constant, and carried out to the “highest pitch.” (He is reacting to the type of training that some armies use of incessant drill to carry out preplanned movements of large forces. He found such training to be virtually useless.) In the quotation immediately above, von Clausewitz states emphatically that the best way to lose the spirit required for victory is to cease to experience the exertions of war and undergo “the indolent inertia of peace.” He is not advocating war for its own sake but he does realize that without opportunities for a continuing real combat action or realistic training experiences that the individual soon becomes

unable to gain the most from new and uncertain environments. There is no doubt the only constant in war is the new and the uncertain and, therefore, the *military genius* must evolve from within a domain of constant combat experience or realistic training.

Uncertainty and Friction; the Organism

Dewey emphasizes the nature of continuity in an aesthetic experience by asserting that the consummation is merely a stage of stability ready to launch the individual into another experience. In terms of a work of art, the consummation of *an* experience may be the beginning of a new aesthetic experience of the very same object depending on *how* the work is seen; for example, the lighting may be different, the viewing angle might have changed or the viewer is in a different physical or mental state than when the previous experiences with the same object were undergone. Von Clausewitz makes an identical point in his discussion of the moral factors in war. The General claims,

Mechanical and optical structures are not subject to dispute. But when they come to the *aesthetics* of their work, when they aim at a particular *effect on the mind* or on the senses, the rules dissolve into nothing but vague ideas.

Medicine is usually concerned only with physical phenomena. It deals with the animal *organism*, which, however, is subject to constant change, and thus is *never exactly the same from one moment to the next*. This renders the task of medicine very difficult, and makes the physician's judgment count for more than his knowledge. But how greatly is the difficulty increased when a mental factor is added, and how much more highly do we value the psychiatrist!

Military activity is never directed against material force alone; it is always aimed simultaneously at the moral forces which give it life; and the two cannot be separated.

But moral values can only be perceived by the inner eye, which differs in each person, and is often different in the same person at different times. (HP: 136-137) (Emphasis added)

Several critical ideas manifest themselves in this brief observation of von Clausewitz. First, the physical world—his “mechanical and optical structures”—is only “real” insofar as that world reacts in relation to the mind of the individual. This is the same construct as Dewey’s demand for a relationship of “doing and undergoing” between the individual and his or her environment. Von Clausewitz even employs terms worthy of Dewey when he describes the environment in term of the *aesthetic* nature of its “effect on the mind or on the senses.” Next, the General observes that humans are *organisms* and organisms are in a continual state of change. This means each person’s relationship with the environment is a relationship of an ever-changing nature and each experience is perforce a new and different one. Experiences, in that sense, can never be claimed as “complete.” Each experience may affect the *way* in which a mind will change but the only guarantee is that the mind *will* change. This reinforces the concept of continuity described earlier. Third, military forces are never engaged against static or predictable opposing forces, a static environment or, what the General calls, “material force alone.” Instead, the military must respond to “moral forces,” which are considered to be reactive and active entities that are unpredictable, uncertain, subject to randomness and chance, and often even unknown. Finally, any understanding that is possible in this environment is only possible by the “inner eye” and, as we have already

seen, this can only be developed by appropriate experience gained in combat and, for the highest level of command, appropriate exposure to the political requirements of the state.

The moral forces to which von Clausewitz refers are but a part of what constitutes the reactive element of the environment in which war is conducted. These forces represent the human element and are always unpredictable and destabilize the surroundings of both combat and the political arena—both are the major and proper concerns of the *military genius*. The other aspect contributing to the instability of the environment of war are those elements of nature that cause all plans to be made moot once hostilities begin. For the purposes of this section, noting that role of unpredictability is sufficient to introduce a major concept of experience that is critical to the thought of both Dewey and von Clausewitz, namely, friction or resistance.

The concept of disorder, disarray, unpredictability, chance and luck are necessary for an experience to be aesthetic and, consequently, is the very thing that enables the individual to become the *live creature* or the *military genius*. “In a growing life, the recovery is never mere return to a prior state, for it is enriched by the state of disparity and resistance through which it has successfully passed. If the gap between the organism and environment is too wide, the creature dies. If its activity is not enhanced by the temporary alienation it merely subsists. Life grows when a temporary falling out is a transition to a more extensive balance of the energies of the organism with

those of the conditions under which it lives.” (AE: 12-13) Growth, claims Dewey, can only occur through the resistances encountered and faced in the domain of the surroundings in which the organism finds itself. Once the “disparity and resistance” is squarely faced and undergone, the organism is forever changed. No reversion to a previous state of existence can occur. The “new” existential state of the organism is path dependent and results from all prior experience. Put simply, the organism is an archetypical example of hysteresis. When stability in the organism is reached, that equilibrium, or the consummation, can only result from the prior resistance or tension between the individual and the environment.

The individual, the organism, always struggles for stability and order. Both von Clausewitz and Dewey are aware that a constant state of equilibrium is impossible because the nature of the world is such that disarray and disorder are the only true constants. To paraphrase Heraclitus, “The only thing constant is change.” Nonetheless, temporary stability marks the goal of an ordered life and offers a consummation, which enables the individual to have a new starting point for future experiences.

In his discussion of the artist, Dewey proclaims, “Since the artist cares in a peculiar way for the phase of experience in which union is achieved, he does not shun moments of resistance and tension. He rather cultivates them, not for their own sake but because of their potentialities, bringing to living consciousness an experience that is unified and total.” (AE: 14) Critical to Dewey’s conception of

the need for “resistance and tension” is the idea that the continual changes in an individual’s relation to his or her environment occur in a *rhythm* of stability and instability.

Direct experience comes from nature and man interacting with each other. In this interaction, human energy gathers, is released, damned up, frustrated and victorious. There are rhythmic beats of want and fulfillment, pulses of doing and being withheld from doing.

All interactions that effect stability and order in the whirling flux of change are rhythms. There is an ebb and flow, systole and diastole: ordered change. The latter moves within bounds. To overpass the limits that are set is destruction and death, out of which, however, new rhythms are built up. The proportionate interception of changes establishes order that is spatially, not merely temporally patterned ... Contrast of lack and fullness, of struggle and achievement, of adjustment after consummated irregularity, form the drama in which action, feeling, and meaning are one. The outcome is balance and counterbalance. These are not static nor mechanical. They express power that is intense because measured through overcoming resistance. Environing objects avail and counteravail. (AE: 15)

Dewey’s concept of resistance and tension is evident. His demand for the rhythmic interplay of the steady and the certain with the parlous and precarious highlights the positive role of resistance in developing the individual to become, potentially, the flourishing or complete individual.

Dewey also notes that resistance can be disruptive and counterproductive if the individual is incapable of interacting appropriately with or ameliorating the effects of his or her environment. In his essay, “Experience, Knowledge and Value: A Rejoinder,” Dewey acknowledges this in his response to a critic, Stephen C. Pepper. He states, “Instead of denying the importance of *conflict* in

esthetic experience, I have emphasized its indisputable function—see for example the references to *Resistance* in the Index. What I have done is to distinguish between cases of conflict that lead to dispersion and disruption (of which for example modern psychiatry gives so many examples), and those cases in which conflict and tension are converted into means of intensifying a consummatory appreciation of material of an individual qualitative experience.

... Mr. Pepper was led astray by ignoring what I said about the uniquely qualitative individualized and discrete aspect of the situations which have esthetic traits.” (LW14: 36-37) This acknowledgement by Dewey frames a possible distinction that could apply between those who, through continued and incessant combat, develop illnesses such as post-traumatic stress syndrome and those who emerge more able to cope in similar environments. In sum, this difference is explained by *how* one deals with and *understands* the “lessons” to be gained from his or her surroundings. “What is called experience becomes so dispersed and miscellaneous as hardly to deserve the name. Resistance is treated as an obstruction to be beaten down, not as an invitation to reflection.

...Experiences are also cut short from maturing by excess of receptivity. What is prized is then the mere undergoing of this and that, irrespective of perception of any meaning” (AE: 46) Again, Dewey is demanding a certain “quality” in the relationship of the individual to the environment. This appropriate quality demands the acceptance of, and maturation through, the resistances and tensions inherent in the relationship.

Von Clausewitz, as does Dewey, finds special significance in the concept of resistance. As earlier suggested, this resistance, or *friction* as the General is wont to call the unexpected, takes the form of feedback from the environment. This feedback has two sources: either from the moral forces of the opposing army and its generals or from the natural environment in the form of terrain, weather, and the like. If this friction is to contribute to the development of the *military genius* the individual must view the uncertainties in a positive manner, *à la* Dewey. Von Clausewitz describes the moral nature of the resistance in terms of the enemy's will, thus,

War, however, is not the action of a living force upon a lifeless mass (total nonresistance would be no war at all) but always the collision of two living forces. The ultimate aim of waging war, as formulated here, must be taken to apply to both sides. Once again, there is interaction. So long as I have not overthrown my opponent I am bound to fear he may overthrow me. Thus I am not in control: he dictates to me as much as I dictate to him. ...

If you want to overcome your enemy you must match your effort against his power of resistance, which can be expressed as the product of two inseparable factors, viz. *the total means at his disposal* and *the strength of his will*. The extent of the means at his disposal is a matter—though not exclusively—of figures, and should be measurable. But the strength of his will is so much less easy to determine and can only be gauged approximately by the strength of the motive animating it. (HP: 77)

Uncertainty pervades the morass of war; the environment is not simply a stagnant pond, unmoving and still, but rather a roiling river ready to change course at any time at the will of the opposing commanders. The will of the commanders is often determinative of an engagement and, in the end, the entire

war. The importance of the commander's, as well as the people's, will can be seen in many engagements throughout history and is clear in battles and wars being fought today. The motives and the will of those forces of terror have effectively held the military might of the western industrialized world at bay for a decade. In this "modern" war, will appears to trump strength of arms and, most certainly, contributes to the uncertainty and friction of the contemporary battlefield.

Generators of uncertainty and friction are an inherent feature of war. This dissertation does not include a discussion of all of them, however, several illustrations should set the framework for the environment in which the commander must operate. Since war, per von Clausewitz, is a political act, the commander-in-chief must be first and foremost politically attuned to the reasons for war. "The political object—the original motive for the war—will thus determine the military objective. ...The political object cannot, however, *in itself* provide the standard of measurement. Since we are dealing with realities, not with abstractions, it can do so only in the context of the two states at war. The same political object can elicit *differing* reactions from different peoples, and even from the same people at different times. We can therefore take the political object as a standard only if we think of *the influence it can exert upon the forces it is meant to move.*" (HP: 81) The import is that even at the highest levels of war, the commanders must realize that the reasons for war are never static and the political mandate for the war itself is always in a state of flux.

Since military action is meant to implement a political aim, the *military genius* must structure his or her understanding for the war on a shifting foundation. Granted, this shift does not often take the form of rapid change, but the potential for shift is nonetheless critical. If the *raison d'être* for the war is subject to change, the entire construct of the war is unlikely to remain steady. As von Clausewitz notes, not all wars have the same goals. If the political aims are ever-changing the ability of the commander to shift the course of the war can be problematic.

A more immediate, and perhaps more interesting, demonstration of the role of resistance and friction in warfare occurs in the tactical and strategic realms of actual combat. Von Clausewitz notes that a major cause of the “unknowns” in the environment of war is the fact the commanders almost always are acting in the arena with imperfect knowledge. Knowledge of the enemy’s strength can only come from intelligence and that is always suspect. When the requirement to understand the enemy’s will and motives is factored into the calculation, the commander is required to make decisions based on only a partial, and perhaps faulty, foundation. At this point in the planning, only prior experience and a strategic sense based on his or her “inner eye,” can guide the *military genius*. The way in which these prior experiences are more meaningfully held, that is in the Deweyan sense of *an* aesthetic experience, the more likely is the commander able to plan appropriately.

Beyond the political motives for war and the planning for action, the actual combat looms as the most critical for direct interaction of individual and environment. Friction in combat is evident at nearly every turn. Almost immediately, once war has begun, the abstract objective of planning and theory gives way to the subjective world of the *real*. The General elucidates, "It is now quite clear how greatly the objective nature of war makes it a matter of assessing probabilities. Only one more element is needed to make war a gamble—chance: the very last thing that war lacks. No other human activity is so continuously or universally bound up with chance. And through the element of chance, guesswork and luck come to play a great part in war." (HP: 85) War is the essence of contingency. The absolute, the necessary, the predictable, are all chimeras.

The subjective nature of war requires the commander to conduct operations in an environment of constant change. This environment is not one that offers hope for abstraction but, rather, requires decisions similar to those a gambler might make, decisions based on an assessment of probabilities and vague understandings of conditions acquired through a lifetime of previous exposure to like conditions and scenarios. Von Clausewitz calls upon the commander's moral qualities (courage, staunchness, presence of mind, and the like) as the only effective antidote to this constricting environment. These moral qualities are not the result of the classroom or philosophical pondering but are the result of experiences in the crucible of battle and, at the highest levels of command,

the understandings gained as a political being—the statesman. “In short, absolute, so-called mathematical, factors never find a firm basis in military calculations. From the very start there is an interplay of possibilities, probabilities, good luck and bad that weaves it way throughout the length and breadth of the tapestry. In the whole range of human activities, war most resembles a game of cards.” (HP: 86)

The *military genius* is at home in this sphere of uncertainty and chance. As new information is always open to doubt and the physical environment is ever changing, the commander realizes that things are never as he or she expects them to be. Von Clausewitz says the genius’s mind must be “permanently armed” to deal with these continually changing and unknown conditions. “If the mind is to emerge unscathed from this relentless struggle with the unforeseen, two qualities are indispensable: *first, an intellect that, even in the darkest hour, retains some glimmerings of the inner light which leads to truth; and second, the courage to follow this faint light wherever it may lead.* The first of these qualities is described by the French term, *coup d’oeil*, the second is *determination*.” (HP: 102) The General’s description of the necessary conditions for dealing with the unpredictability of war parallels Dewey’s understanding of *an* experience—the aesthetic experience of the *live creature*. As stated earlier, *Coup d’oeil* is the “inner eye” which can only develop through constant contact with the experiences of war or realistic training carried out to the highest level possible. Only the continual cycle of interacting with the environment in such a way as to

develop the sense of the battle or, at the highest levels, the entire war will allow the commander to make the future decisions necessary for victory. The General says quick and timely decisions are critical if a commander is to control the battle or the war. These decisions are only possible if the commander has developed the ability to see all the pertinent factors necessary to make a decision that has the highest probability of success. This ability, *coup d'oeil*, is a developed ability that is second nature to the *military genius*. In today's parlance, *coup d'oeil* is often translated as "situational awareness." This seems a weak characterization of the term, however, because mere awareness neglects the requirement for continual exposure to the hostile environment of war and the need to develop the right habits in order to carry the awareness through to action.

Like Dewey's continual loop of doing and undergoing, von Clausewitz demands constant interaction with the environment and subsequent decisions and actions. These actions are the foundation of what he describes as the commander's moral qualities. The General portrays his call for action as *determination*. "Determination in a single instance is an expression of courage; if it becomes characteristic, a mental habit. But here we are referring not to physical courage but to the courage to accept responsibility, courage in the face of a moral danger. This has often been called *courage d'esprit*, because it is created by the intellect. That, however, does not make it an act of the intellect: it is an act of temperament." (HP: 102) Further, determination can only be built on

previous experience. The purpose of determination is to allow the commander to *act* when the fog of combat would stymie the novice or the inexperienced. The motives for action may be lacking in the commander without the habits gained in the constant demands of war. Mere understanding of the situation—which, in itself, is a daunting capability—is not necessarily sufficient to prod the commander into action. Determination's role is to provide that prod.

Coup d'oeil and determination are bedrock of the commander's *presence of mind*. Von Clausewitz stresses that presence of mind is vital in war. "This (presence of mind) must play a great role in war, the domain of the unexpected, since it is nothing but an increased capacity of dealing with the unexpected. We admire presence of mind in an apt repartee, as we admire quick thinking in the face of danger. Neither needs to be exceptional, so long as it meets the situation. A reaction following long and deep reflection may seem quite commonplace; as an immediate response it may give keen pleasure. The expression 'presence of mind' precisely conveys the speed and immediacy of the help provided by the intellect." (HP: 103-104) These talents of the commander are habits formed through continued exposure to the frictions of war. Not everyone exposed to these frictions will develop the necessary *coup d'oeil*, determination and presence of mind to become the complete commander. The *military genius* will develop these requisite talents only by undergoing and doing in the Deweyan sense the experiences presented in actual war.

Theory and Practice, or the Abstract and the Real

Friction, while inherent in the concepts of the uncertain, the improbable, chance and luck, is also the basis for demanding that life be pursued in the *real* world and not in some *abstract* realm.

Everything in war is very simple, but the simplest thing is difficult. The difficulties accumulate and end by producing a kind of friction that is inconceivable unless one has experienced war. ... Friction is the only concept that more or less corresponds to the factors that distinguish real war from war on paper. ... This tremendous friction, which cannot, as in mechanics, be reduced to a few points, is everywhere in contact with chance, and brings about effects that cannot be measured, just because they are largely due to chance. ... *Incidentally, it is a force that theory can never quite define.* (HP: 119-120) (emphasis added)

Theory, to be of any use, must include the understanding that the *live creature* and the *military genius* will act within the construct of their experiences and, therefore, be acting outside of the “rules.” Both von Clausewitz and Dewey made clear that theory, whether one is addressing the aesthetic in a work of art or the practical necessity of fighting a war, must not and cannot dictate *how* the experience is to be undergone or understood. Dewey identifies the theorist as one who isolates art from the realm of experience by detaching the object from the cycle of interaction of the object and its environment from the artist or the viewer. Theory assumes appreciation comes *from* the object itself and not from the relationship of individual *with* the object. “Theory can start with and from acknowledged works of art only when the esthetic is already compartmentalized, or only when works of art are set in a niche apart instead of being celebrations, recognized as such, of the things of ordinary experience.

Even a crude experience, if authentically an experience, is more fit to give a clue to the intrinsic nature of esthetic experience than is an object already set apart from any other mode of experience. (AE: 9) This sense of the limits of theory describes von Clausewitz's view of the value of theory for the *military genius*. Von Clausewitz, describing danger in war, also notes the value of experience contra theory as the guide to understanding.

It (danger) is the lens, so to speak, through which impressions pass to the brain.

And yet there can be no doubt that experience will by itself provide a degree of objectivity to these impressions. ...

All these and similar effects in the sphere of the mind and spirit have been proved by experience; they recur constantly, and are therefore entitled to receive their due as objective factors. What indeed would become of a theory that ignored them?

Of course these truths must be rooted in experience. No theorist, and no commander, should bother himself with psychological and philosophical sophistries. (HP: 137)

Neither philosopher is claiming that theory has no value but, rather, that theory cannot give rise to an aesthetic experience nor can theory act as a guide to action in war. Von Clausewitz believes that the real conduct of war decries theory and its "rules and regulations." This does not mean war has no rules of behavior in combat but, rather, that rules for how to interpret, and dicta for how to understand, the conditions of war are useless. Only *actual* experience can give that appreciation necessary for survival and victory. This is the sense in which he claims that the *military genius* is above the rules. The sense developed from intimate knowledge of combat, or continued and realistic training, is the

foundation for decisions of the *genius*. For von Clausewitz, understanding of the environment of war does not come from rules or dogma. The connection to Dewey's construct of the aesthetic is clear.

Dewey asks rhetorically whether theory can aid in aesthetic appreciation. He cites this query as a branch of criticism, which can only offer something useful if the theorist can aid the individual in discovering how to relate to the object in question. He asserts this can only be done if the theory can somehow relate the observer and "the function of art ...to other modes of experience." (AE: 10) As cited earlier in this dissertation, von Clausewitz claims theory becomes "infinitely more difficult" once the individual tries to apply it to the real world. "Architects and painters know precisely what they are about as long as they deal with material phenomena. ... But when they come to the aesthetics of their work, when they aim at a particular effect on the mind or on the senses, the rules dissolve into nothing but vague ideas." (HP: 136) Like Dewey, a theory is only useable in the real world of experience if that theory allows for a full continuum of interaction of the individual and the environment. No theory can determine the individual nature of the aesthetic nor can rules determine how to develop *coup d'oeil* or *determination* and *presence of mind* on the battlefield.

The prior discussion of von Clausewitz's separation of the analytic (theory of war) and the synthetic (*real war*) indicated that theory is intended to aim at a fixed or constant understanding while the actual environment offers nothing but uncertainty; hence theory can offer no rules and the *military genius* thus

“rises above all rules.” (HP: 136) The commander is for all intents and purposes reacting in an intimate way with his or her environment and decisions must come from within and not be subject to received dogma. Likewise, Dewey says the same thing regarding the separation of theory and the *real*. “The elevation of the ideal above and beyond immediate sense has operated not only to make it pallid and bloodless, but it has acted, like a conspirator with the sensual mind, to impoverish and degrade all things of direct experience.” (AE: 32)

To be fair to both the General and to Dewey, we must be aware that theory can have a positive role. Von Clausewitz believes theory is a good basis for study since theory makes one familiar with the subject matter. He makes a similar claim for the study of history. “It is precisely that inquiry which is the most essential part of any *theory*, and leading to a close *acquaintance* with the subject; applied to experience ... it leads to thorough *familiarity* with it. ... Theory ... is meant to educate the mind of the future commander, or, more accurately, to guide him in his self-education, not to accompany him to the battlefield ...” (HP: 141) Quite obviously, theory plays an important role in our reflections and our attempts to understand any subject. Dewey is well known for his “theory of education” while von Clausewitz is renown for his “theory of war.” This should not confuse the reader because both men are making the same simple claim; while theory may help us understand a subject and make us familiar with that subject, theory cannot make an experience an aesthetic one either in the world of art or the world of war.

In sum, von Clausewitz notes that the abstract and the analytic cease to guide the individual effectively once he or she is thrust into the synthetic environs of the world.

(W)e can only say to ourselves, that it is a sheer impossibility to construct for the art of war a theory, which, like a scaffolding, shall ensure to the chief actor an external support on all sides. In all those cases in which he is thrown upon his talent he would find himself away from this scaffolding of theory, and in opposition to it, and, however many-sided it might be framed, the same result would ensue of which we spoke when we said that talent and genius act beyond the law, and *theory is in opposition to reality*. (OW: 189-190) (emphasis added)

Like Dewey, the General directs the genius into the world of the living; the actual interactive environment and the changes and responses of the individual determine what *an* experience can be and the aesthetic nature of one's existence.

Art and Science

Von Clausewitz was critical of those theorists who attempted to make war subject to rules. These theorists and analysts addressed war as a pure science amenable to empirical experimentation and subject to certain "laws" of war. The General, as demonstrated, had little, if any, tolerance for this attempt at theory. *On War* addressed the question of whether war was an art or a science and in so doing answered once again those analysts and critics, such as Jomini, who saw war as an endeavor subject to strict analysis.

Dewey also addressed a similar question regarding science and art in relation to the aesthetic and the nature of experience. As noted, *an* experience requires an intimate relationship between individual and environment. This relationship, if the experience is to qualify as aesthetic, is continuous and always changing until a consummation is reached. In the relationship, the individual and the environment are affecting each other in ways that “renew” the relationship at every instant until the point of stability. Since the relationship and the ever-present changing are unique to the individual and the attendant environment, no rules or requirements can be laid on the interaction as to how the relationship will progress. Thus, the aesthetic experience is not teleological.

Von Clausewitz takes theorists to task for not delving into the *nature* of war but trying to analyze war through mathematical balances and formulas. “Writers on theory felt the difficulty of the subject soon enough, and thought themselves entitled to get rid of it by directing their maxims and systems only upon material things and a one-sided activity. Their aim was to reach results, as in the science for the preparation for war, entirely certain and positive, and therefore only to take into consideration that which could be made matter of calculation.” (OW: 182) To answer the theoreticians, von Clausewitz undertook a brief—but powerful—attempt to explore war relative to its nature as science or art. Book II, Chapter III, of *On War* is titled “Art or Science of War.” This short chapter reflects the General’s awareness, in a Deweyan sense, of the

shortcomings of viewing the world in the abstract versus being *in* the *real* environment of actual combat.

Von Clausewitz begins by acknowledging that the terms 'art' and 'science' are unsettled and arguments persist as to what the words mean. He claims that this is easily resolved because, as he has pointed out earlier in his work, "knowing" and "doing" are different from one another and denote disparate actions. "The two are so different that they should not easily be mistaken the one for the other. The 'doing' cannot properly stand in any book, and therefore also Art should never be the title of a book." (OW: 201) This cutting remark, I surmise, is aimed at Baron Antoine-Henri Jomini whose *magnum opus* is titled *The Art of War*. In his essay "Jomini and Clausewitz: Their Interaction," Christopher Bassford, Professor of Strategy at the National War College, says in contrasting the views of the General and the Baron,

In contrast (to von Clausewitz), Jomini's view of history and of war was static and simplistic. He saw war as a "great drama," a stage for heroes and military geniuses whose talents were beyond the comprehension of mere mortals. He saw the revolutionary warfare in which he himself had participated as merely the technical near-perfection of a fundamentally unchanging phenomenon, to be modified only by superficial matters like the list of *dramatis personae*, technology, and transient political motivations. He drew his theoretical and practical prescriptions from his experiences in the Napoleonic wars. The purpose of his theory was to teach practical lessons to "officers of a superior grade."

Accordingly, Jomini's aim was utilitarian and his tone didactic. His writing thus appealed more readily to military educators. (Web)

Jomini had reduced war to certain movements of armies and set tactics to be used in given situations. This is a view that is non-synchronous with almost any perspective of von Clausewitz. A static view of war is precisely the opposite of either a Clausewitzian or a Deweyan view. For any majestic human endeavor, especially one such as war, both philosophers would demand dynamic interaction and an ever-changing relationship of commander to environment.

Von Clausewitz simplifies for the reader his usage of the terms “art” and “science.” Art is, for the General, the act of *doing*, or *being able*, while science is mere *knowing*. Like Dewey, von Clausewitz notes that art includes “branches of knowledge (which may be separately pure sciences) necessary for the practice of an art. ... That in every Art certain complete sciences may be included is intelligible of itself, should not perplex us. But still it is worth observing that there is also no science without an admixture of Art.” (OW: 201) Likewise, in, *Experience and Nature*, Dewey bolsters this idea, “When this perception dawns, it will be a commonplace that art—the mode of activity that is charged with meanings capable of immediately enjoyed possession—is the complete culmination of nature, and that ‘science’ is properly a handmaiden that conducts natural events to this happy issue. Thus would disappear the separations that trouble present thinking: division of everything into nature *and* experience, of experience into practice *and* theory, art *and* science, of art into useful *and* fine, menial *and* free.” (LW 1: 269)

In *Art as Experience*, Dewey notes the integral linkage of art with science as follows:

The difference between the esthetic and the intellectual is thus one of the places where emphasis falls in the constant rhythm that marks the interaction of the live creature with his surroundings. ... The odd notion that an artist does not think and a scientific inquirer does nothing else is the result of converting a difference of tempo and emphasis into a difference in kind. The thinker has his esthetic moment when his ideas cease to be mere ideas and become corporate meanings of objects. The artist has his problems and thinks as he works. But his thought is more immediately embodied in the object. Because of the comparative remoteness of his end, the scientific worker operates with symbols, words and mathematical signs. The artist does his thinking in the very qualitative media he works in, and the terms lie so close to the object that he is producing that they merge directly into it. (AE: 14-15)

Von Clausewitz noted that art and science are inextricably linked in the manner suggested by Dewey. Like Dewey's assertion that the artist does his or her thinking in the media of concern, the General tilts the scales toward art, rather than science, for the *military genius*. "In a word, if it is impossible to imagine a human being possessing merely the faculty of cognition, devoid of judgment or the reverse, so also Art and Science can never be completely separated from each other. The more these subtle elements of light embody themselves in the outward forms of the world, so much more separate appear their domains; and now, once more, where the object is creation and production, there is the province of Art; where the object is investigation and knowledge Science holds sway. After all this it results of itself that it is more fitting to say the Art of War

than Science of War.” (OW: 202) With this claim, von Clausewitz asserts that war is neither an art nor a science in the strict sense that those terms have been defined. If war is to be placed into either category, and that placement is used to construct an understanding of war, then not only will we be misled in our understanding but also we will have pigeonholed war into a limited and confined space that constricts full appreciation of war as the apex of human endeavor. Analyzing war as either art or science puts war on a par with particular arts or sciences and, the General believes, results “in a mass of incorrect analogies.” (HP: 149)

The incorrect analogies result in either trying to make war a scientific endeavor subject to hard and fast rules and axioms or to an art in the strict meaning. War successfully waged can never be fought scientifically according to the General. *Coup d’oeil* and determination are not subject to rules. Similarly, if the critic wishes to claim war is an art alone, then the concept of war devolves to the concept of handicraft. This will not do if one is to understand war. (Von Clausewitz seems to have believed that handicraft was an inferior form of art and subject to laws in a similar manner to scientific laws.) Since war transcends both science and art as strictly understood, von Clausewitz makes a bold claim. The General asserts that we must concede “war does not belong in the realm of the arts and sciences; rather it is part of man’s social existence.” (HP: 149) The assertion that war is inherent in the social nature of man transcends any

attempt to set war into a definable box regardless of whether that box is science or art.

Existence as a Social Construct

We therefore conclude that war does not belong to the realm of arts and sciences; rather it is part of man's social existence. War is a clash between major interests, which is resolved by bloodshed—that is the only way in which it differs from other conflicts. Rather than comparing it to art we could more accurately compare it to commerce, which is also a conflict of human interests and activities; and it is *still* closer to politics, which in turn may be considered as a kind of commerce on a larger scale. Politics, moreover, is the womb in which war develops—where its outlines already exist in their hidden rudimentary form, like the characteristics of living creatures in their embryos. (HP: 149)

The social aspect of war exists at many levels for von Clausewitz. In separating war from the arts, the General claims war differs from those arts in a very specific and important manner. The mechanical arts, he tells us, directs the will toward inanimate matter or, as in the fine arts, the mind and emotions are directed matter which may be animate but is passive. The difference between the arts and war, however, hinges on the reactive nature of the matter with which war deals. "In war, the will is directed at an animate object that *reacts*. It must be obvious that the intellectual codification used in the arts and sciences is inappropriate to such an activity. At the same time it is clear that continual striving after laws analogous to those appropriate to the realm of inanimate matter was bound to lead to one mistake after another. Yet it was precisely the mechanical arts that the art of war was supposed to imitate. The fine arts were

impossible to imitate, since they themselves do not yet have sufficient laws and rules of their own. So far all attempts at formulating any have been found too limited and one-sided and have constantly been undermined and swept away by the currents of opinion, emotion and custom.” (HP: 149) At the macro-level, war differs from the arts and sciences by the very reactive nature of the forces involved. Earlier in this dissertation, the fact that each side in war reacted as an *organism* was seen to be the force that produced the “moral forces,” which von Clausewitz argued were the primary contributors to the uncertainty inherently experienced as “the norm” in all of warfare. War, described by the General, is an act of human intercourse and prompts his parallels to commerce and, more pointedly, to politics. These activities are entirely social and offer an overarching descriptor for war.

The social nature of war is seen clearly in the “wonderful trinity” that von Clausewitz cites is the structure of all war. Recall, the elements of this “paradoxical” trinity of war are composed “of violence, hatred, and enmity, which are to be regarded as a natural force; of the play of chance and probability within which the creative spirit is free to roam; and, of its element of subordination, as an instrument of policy, which makes it subject to reason alone.” (HP: 89) The first leg of the trinity is the will and concerns of the people; the commander and the army represent the second leg; the third leg consists of the government and the political will of the state. Thus, the nexus of the people, the army and its commander, and the political structure of the state constitute

the social milieu in which war is conducted. These forces continually interact to define a constantly changing environment and define the very nature of war. The commander is a player—arguably the most important player—in the conduct of war but he or she does not act alone. The commander is a part of the larger society for which he or she acts and, to a large extent, is defined by that society.

The commander and the army are co-equal to the community and the political. Of concern are the main moral or social elements of the army that make for success in war. Von Clausewitz lists the principal moral elements of the military as *“the skill of the commander, the experience and courage of the troops, and their patriotic spirit.”* (HP: 186) The General discusses these moral elements and describes their importance and development. Dissecting each element is unnecessary other than to note that each of these qualities is developed not in isolation but as the result of intense social conditioning and interaction. The army does not function alone as separate and disparate units or individuals. The commander’s skill is developed through continuous and intense interaction in combat and, eventually, at the highest levels of the political arena. This interaction with armies—both one’s own and the enemy’s—is intensely social. This is certainly the case for senior leaders as each becomes steeped in the political arena of the nation. Similarly, the experience and courage of the troops can only be forged in a tight knit community of peers undergoing similar trials and hardships. No peacetime community offers or

demands the bonds similar to those required for members of a military unit. This bonding is an example of social cohesion *par excellence*. The demand for patriotic spirit is a function of the spirit felt by the members of the nation at large. The community spirit is the social glue that binds the members of the nation to the cause at hand; this function is purely a social phenomenon. Community spirit, and the patriotic spirit of the military—both are socially determined—often govern the outcome of not only a battle but also a war. If one considers the national feeling of the populace in the Allied countries during World War II and compares that with the national feeling in the same countries during the Vietnam War, the claim that outcome results from internal social conditions seems not only feasible but also plausible.

The underlying point of von Clausewitz's description of the military virtues required for success is that war is entirely a social phenomenon and that forces are not only defined by the social makeup of each military force in isolation but are products of the community from which those forces come, the political leaders that set the objectives, and the reactive forces of the enemy. All of these are social in nature and define war as an activity that transcends definition as simply an art or a science.

In *Schools of To-Morrow*, Dewey thickens the idea of the social in the development of the individual.

Since power for dealing with remoter things comes from power gained in managing things close to us, the direct *sense of reality* is formed only in narrow *social circles* ... True human

wisdom has for its bedrock an intimate *knowledge of the immediate environment* and trained *capacity for dealing with it*. The *quality of mind* thus engendered is *simple and clear-sighted*, formed by having to do with uncompromising realities and hence *adapted to future situations*. It is firm, *sensitive and sure of itself*. ... The moral is plain: *Knowledge that is worthy of being called knowledge, training of the intellect that is sure to amount to anything, is obtained only by participating intimately and actively in activities of social life.*" (MW8: 249-250) (emphasis added)

Dewey's brief comment contains the essence of von Clausewitz's conception of the social in the development of the successful commander. His observation that our "direct sense of reality" is formed by commitment to close-knit social environs is the paradigm for development of the *military genius* as well as for the army in general. In the previous discussion of the necessity for a refined *coup d'oeil*, the observation was made that only through continuous participation in actual combat and the political deliberations of the state—both closely held social undertakings—could the requisite capabilities be developed in the commanders at the highest levels. Likewise, this Clausewitzian demand for participation offers a preview for Dewey's "intimate knowledge of the immediate environment and trained capacity for dealing with it." The intimate knowledge of the immediate environment and the capacity for dealing with the vagaries of that environment exemplifies precisely von Clausewitz's understanding of *coup d'oeil* and the determination for acting appropriately under conditions of stress and uncertainty. Dewey calls this ability "wisdom" but this wisdom is nothing neither more nor less than what is required of the

commanders and leaders at the highest levels of the military if that military is to be victorious. He says this plainly in the quote above, “The quality of mind thus engendered is simple and clear-sighted, formed by having to do with uncompromising realities and hence adapted to future situations. It is firm, sensitive and sure of itself.” The quality of mind is *coup d’oeil* which, as the General has noted, is the ability to see clearly in the fog of war and make the best possible decision in the haze and mist of uncertainty, luck, chance, and unpredictability. This ability can only be garnered through intense and social interactions of the appropriate sort. Dewey’s stipulation for a mind that is sensitive and sure of itself is a restatement of the General’s call for a mind that is reflective yet resolute. Dewey’s moral that knowledge worthy of being called knowledge can only be fostered and engendered as a result of strong social forces parallels von Clausewitz’s observation that war—if war is to be successfully waged—is more than an art or a science, rather, war is a social phenomenon and construct.

The Live Creature and the Military Genius

War is a social endeavor for all who participate. For the highest commander (the *military genius* or commander-in-chief, as von Clausewitz describes this supreme leader), his or her development must be realized through social experiences appropriately undergone. In essence, von Clausewitz’s *military genius* is an aesthetic being akin to Dewey’s *live creature*. The parallel threads in the philosophy of each man, discussed thus far in this dissertation, should

already give the reader clear insight into how the *military genius* represents the quintessential *live creature*. John J. McDermott describes the *live creature* as an individual who “is about the potentially incessant drama of everyday experience. ... Dewey then works out the relationship between the rhythm of experience ordinarily undergone and the achievement of the enhancements and consummations which characterize human living at its peak.” (1981: 525-526) The *military genius* fits well this description of the “human living at its peak.” The only difference is, for the *military genius*, the “everyday experience” takes place in the boiling kettle of war.

The *live creature* lives life to the fullest possible extent by sampling the experiences offered in the aesthetic manner discussed earlier in this dissertation. That is, experiences are held to be aesthetic or meaningful only insofar as the individual acts in relationship with the environment and continues the interaction, each continually changing the other, until a consummatory condition is reached. This state represents a temporary stability that acts as a starting point for future experiences. Experiences, thus undergone, constitute the aesthetic and allow the individual to fully engage in life and extract the most from future experiences. This individual is the *live creature*. The military officer who undergoes experiences aesthetically in the environments of combat and statecraft emerges as the *military genius*. Both the *live creature* and the *military genius* emerge from the same mold; the only

difference between the two is nature of the environments from which they are produced.

“Genius,” as described by von Clausewitz, is not simply a person of great intellect. Rather, a genius is a person who has a “very highly mental aptitude for a particular occupation.” (HP: 100) Genius certainly requires intellectual ability but genius also requires appropriate temperament. This temperament allows the individual to function at a high level in times of severe stress and in an environment of uncertainty. This ability to respond appropriately and quickly to glean the important factors necessary for the right decision can, per the General, only be developed through constant combat or realistic training. The necessary exposure to combat, or training, is the environment that permits the future *military genius* to reach his or her maximum potential. Only through a continual series of real experiences—in which the individual can winnow the important factors presented in various scenarios occurring in the fog of war—can the future leader undergo the necessary transformation from soldier to *military genius*. All the gifts of intellect and temperament must be nurtured through experience so that all the “gifts” can function to provide the maximum capability to the commander. “Genius consists *in a harmonious combination of elements*, in which one or the other ability may predominate, but none may be in conflict with the rest.” (HP: 100) Von Clausewitz believes that the development of the genius is a social function to be sure.

If every soldier needed some degree of military genius our armies would be very weak, for the term refer to a special cast of mental or moral powers which can rarely occur in an army when a society has to employ its abilities in many different areas. The smaller the range of activities of a nation and the more the military factor dominates, the greater will be the incidence of military genius. This, however, is true only of its distribution, not of its quality. The latter depends on the *general intellectual development* of a given society. In any primitive, warlike race, the warrior spirit is far more common than among civilized peoples. It is possessed by almost every warrior, but in civilized societies only necessity will stimulate it in the people as a whole, since they lack the natural disposition for it. (HP: 100)

The General notes that necessity stimulates the warrior spirit—a spirit that is the foundation of the *military genius*. Recall this idea is analogous to Dewey's claim that the aesthetic was, in earlier times, endemic to everyday life because man lived in an environment of necessity; that is, man was always in the precarious position of ensuring his or her own survival. Necessity demands total engagement with the environment. Similarly, the *military genius* can only develop through a total engagement with the environment of war. This total engagement is the only way the commander can become the master of the uncertain and unpredictable. *Coup d'oeil* and determination are the products of aesthetically undergone experiences in war.

The commander becomes responsible for not only himself or herself but ultimately for the entire military apparatus as well as for the state. This responsibility can only be adequately fulfilled by timely and proper decisions in both combat and at the policy levels of the nation. "It is the impact of the ebbing

of moral and physical strength, of the heart-rending spectacle of the dead and wounded, that the commander has to withstand—first in himself, and then in all those who, directly or indirectly, have entrusted him with their thoughts and feelings, hopes and fears. ... Such are the burdens in battle that the commander's courage and strength of will must overcome if he hopes to achieve outstanding success. The burdens increase with the number of men in his command, and therefore the higher the position, the greater the strength of character he needs to bear the mounting load." (HP: 104-105) The only way the officer can continue to scale the ladder of leadership and shoulder the ever-increasing demands of responsibility, is to garner the lessons appropriate to his or her position that are offered through the experiences of war. At base, the only way a leader can best fulfill his or her responsibilities to self, troops, or the state is to make timely and adequate decisions which offer the best chances of success and victory. Only through the continuous rhythm of doing, undergoing, and consummation can the *military genius* develop this ability.

The *military genius* must become immersed in the activity of war. Only through immersion can experiences be properly undergone. Von Clausewitz claims this immersion can only occur when the commander is driven by strong motivation. The General claims that passions such as "patriotism, idealism, vengeance, (and) enthusiasm of every kind" are venerated emotions but they are not sufficient to sustain the leader. Rather, the most powerful emotion that inspires performance in battle is the quest for fame, honor, and renown. "Other

emotions ... may, indeed, rouse the mass to action and inspire it, but they cannot give the commander the ambition to strive higher than the rest, as he must if he is to distinguish himself. They cannot give him, as can ambition, a personal, almost proprietary interest in every aspect of fighting, so that he turns each opportunity to best advantage ... It is primarily this spirit of endeavor on the part of commanders at all levels, this inventiveness, energy, and competitive enthusiasm, which vitalizes an army and makes it victorious. And so far as the commander-in-chief is concerned, we may well ask whether history has ever known a great general who was not ambitious; whether, indeed, such a figure is conceivable." (HP: 105)

Von Clausewitz characterizes the commander as one who strives at the highest levels to garner the most from experiences so that he or she can use every opportunity to the best advantage. This spirit, whether it be generated by ambition or some other emotion, is what is required if one is to undergo *an* experience in the Deweyan sense. Total immersion in the environment is the necessary condition taking part in the rhythm and continuity of meaningful, aesthetic, experience. Dewey tells us the continuity of experience is such that each consummation gives a platform for further experiences. Similarly, von Clausewitz says that when a decision is in doubt the commander must always stick with his or her first decision unless clear and overriding conviction forces a change. (HP: 108) He calls this ability to hold to our earlier convictions "strength of character." More important, analogous to Dewey's concept of

experience, this principle of holding to initial decisions unless clear evidence forces a change, results from lessons learned from all previous experiences. That is, the commander's earlier experiences form the bedrock for the current required decision and should appropriately inform him or her when making the new decision at hand. Like Dewey, von Clausewitz claims the decisions of the commander require creativity and imagination that can only be incubated by having appropriately undergone earlier experiences.

The General captures the role of experience, of the aesthetic kind mandated by Dewey, in the development of the *military genius* at the end of Book I, Chapter III, of *On War*. He says,

Circumstances vary so enormously in war, and are so indefinable, that a vast array of factors has to be appreciated—mostly in the light of probabilities alone. The man responsible for evaluating the whole must bring to his task the quality of intuition that perceives the truth at every point. Otherwise a chaos of opinion and considerations would arise, and fatally entangle judgment. Bonaparte rightly said in this connection that many of the decisions faced by the commander-in-chief resemble the mathematical problems worthy of the gifts of a *Newton* or an *Euler*.

What this task requires in the way of higher intellectual gifts is a sense of a unity and a power of judgment raised to a marvelous pitch of vision, which easily grasps and dismisses a thousand remote possibilities which an ordinary mind would labor to identify and wear itself out in so doing. Yet even that superb display of divination, the sovereign eye of genius itself, would still fall short of historical significance without the qualities of character and temperament we have described. (HP: 112)

This short synopsis of the *military genius* includes several thrusts, which could easily derive from Dewey's conditions for the *live creature*. First, the genius is

born in the world of uncertainty, resistance, and the novel. Second, the responsible individual must bring his or her “intuition” to bear at every point. This intuition can only evolve through exposure to experiences of the appropriate kind. Without this ability to discern the real import of novel situations presented in the cloud of uncertainty, chaos ensues and judgment is weakened. Next, clarity gained by experience enables the genius to grasp the important aspects from an indefinitely perceived environment. The “possible” is retrieved from an atmosphere of the unachievable and the apparently absurd. Finally, only the experience gained by being fully in the world, in this case the world of war, can the *military genius* mature and flourish. This genius is *the* exemplar of the Deweyan *live creature*.

To summarize, Dewey asserts that our experiences require active participation while von Clausewitz claims real experience demands interaction with the moment and the living and reacting forces of war. Dewey says that principles of action are abstract and that theory is in tension with life. Von Clausewitz gives great weight to the lessons gained through experience. He has minimal tolerance for using theory as a basis for one’s actions in warfare. This holds true for all levels, from those who set the political agenda to the commander who envisages and determines the military strategy for the army to those who actually lead the forces in combat.

The past, for Dewey, connects the live creature to the future. This connection is organic and can only be had through experience and education based on the

actual *doing* by the participant. Likewise, von Clausewitz is clear that the *doing* is what makes the military genius and no substitute for actually engaging in past actions exists if success is to be won in current or future actions. Both philosophers have fully developed concepts of experience and experience's import for each individual in reaching his or her potential. For Dewey and von Clausewitz, the actively engaged individual must develop morally. This can only be done through proper grounding in experience. Each philosopher describes moral virtues and how they are inculcated in the individual. While von Clausewitz puts great weight on the virtues as they pertain to war, he is quick to stress that these moral virtues, fostered as a social consequence, must be compatible with the moral virtues of society. Consequently, the development of moral virtues for Dewey and von Clausewitz are similar and, again, foundationally set in experience.

Emotion and impulse exert an important role in the exposition of both Dewey and von Clausewitz. While both men acknowledge the part that emotion and impulse play in the development of the individual, von Clausewitz is quick to assert that we must understand how these human feelings can affect the decision process and what, ultimately, their effects can be on the outcome of war. Conceptually, emotion and impulse can color experience and determine the educational value and quality of each experience. Regardless, the import is that Dewey's understanding of impulse again incorporates von Clausewitz's assertions and insights into the function of emotion in our experiences.

Von Clausewitz's demand for experience in the development of the *military genius* fits snugly with Dewey's requirement for experience as the basis for the live creature. The parallel in the *processes* inherent in the educational and aesthetic components of experience is apparent. Dewey sees the *process of experience* as a continuous loop of *doing* and *undergoing* resulting ultimately in a consummation of the experience. This consummation is not the end of experience but, rather, the bedrock on which new and continued experience can be had. Likewise, for von Clausewitz experience is a continued series of *doings*, which must be repeated on a regular basis if any experience is to give meaning to the individual. That is, for both men, experience can never become static but requires constant refinement and shifts to new experiences.

Most important to showing the deep philosophic connection between Dewey and von Clausewitz is the conclusion of each that the aesthetic of living is, in the end, a *social* action. For Dewey the aesthetic is a social activity and for von Clausewitz the same holds true for war. Both arrive at their respective conclusions through analysis of art—the finer arts for Dewey and the art of war for von Clausewitz.

This Deweyan comparative with von Clausewitz should demonstrate the close philosophical connection between the two philosophers. The close connection of each man's philosophy with that of the other is striking when each thread examined in this chapter is appraised. When all the threads are taken together the similarity of the two philosophies is clear. Intriguingly, von

Clausewitz is often thought of strictly in relation to his ideas on war. My contention is that this should not be the case. While his ideas are couched in terms of their relation to war, his concepts are generally of a nature that applies to a pragmatic philosophy in general. Dewey, who has developed these ideas to a fine edge, has given philosophy a template from which to better understand the contribution von Clausewitz has made to philosophy.

Full understanding von Clausewitz's and Dewey's philosophy of experience and the development of the person alive in the world enables us to address the question asked early in this chapter, "Do these philosophies have value in today's modern world, especially, in the context of contemporary war?"

CHAPTER V

THE DEWEY/VON CLAUSEWITZ PHILOSOPHY IN MODERN WAR

Dewey and von Clausewitz epitomized pragmatic philosophy at its zenith. Both men's deep concern centered on how man functioned in his or her social, communal world. Neither bothered with the academic niceties of philosophy but rather each focused on man's relation to the world and his or her particular environment. The philosophies propounded by these men are to be *lived* so that the individual can partake fully in his or her surroundings and live the aesthetic life. For Dewey this life resulted in the *live creature* and for von Clausewitz the product was the *military genius*. As philosopher Guy W. Stroh, while describing William James' conception of pragmatism, so well states,

One principal advantage of pragmatism is the ability to cut through endless entanglements with words in philosophical controversies. Pragmatism cannot accept any purely verbal solution to problems. ... Consider the problem of materialism versus spiritualism. ... The materialist wants to account for everything in terms of matter and motion, while the spiritualist wants to account for matter and motion themselves. But James contends that no adequate solution to this problem can be found until we ask what practical difference is involved in these two conceptions for our personal lives. There can be no point to the problem or the resolution of it until we demand and look for practical consequences. This means we must look to the future, since without a future there can be no practical consequences. (Stroh: 131)

James' demand for a forward-oriented view that can be judged only by the "workability" of the practical consequences seems a central tenet of both

Dewey and von Clausewitz. This does not mean that anything that works is permissible but, rather, that the practical consequences, when directed toward a meaningful aim, objective or, more important, a *raison d'être*, are a significant determinant of appropriate action. As Stroh characterizes Dewey's conception, "All good art serves some human purpose and all great art serves as a source of enduring enrichment. ... What they (art and science) have in common is the devising of using of intelligent means to produce worthwhile human ends." (Stroh: 261) Thus, for Dewey the aim is to undergo the aesthetic in all of our actions of living in the pursuit of "meaningful human ends" while, for von Clausewitz, the *paramount* meaningful human end is to prevail in war.

With this view foremost in the reader's mind, one must address the obvious matter of the practical consequences of the Dewey/von Clausewitz philosophy. More succinctly, we must ask and answer the question of whether or not this philosophy, indeed, has consequences in contemporary war and if so what are those consequences. Can the pragmatic philosophy of these two philosophers act as a paradigm for action in modern war? If so, does this relate to the making of the modern military leader? This chapter demonstrates that the philosophies discussed thus far are not only germane to today's wars but also serve as the conceptual basis for one of the most accomplished branches of the modern military, namely, the United States Marine Corps (USMC). The intent is to demonstrate that philosophical concepts, if they are to be of service to the social

fabric of the nation and community, must manifest themselves in action. That is, the pragmatic philosophy must be directed, through action, to some meaningful and consequential ends. For the purposes of this dissertation, those meaningful and consequential ends are taken to be those of von Clausewitz, that is, victory in war.

A synthesis of their ideas leading to action, or actionable activity, is required to demonstrate that the philosophies of Dewey and von Clausewitz fit this construct. I propose to show the practical nature of these philosophies through the conceptual synthesis developed by John Boyd. That synthesis laid the foundation of what the USMC would later develop as its core philosophy for fighting modern wars. I will then demonstrate that the doctrine of USMC can be used effectively at all levels of modern war to lead to a successful outcome if that doctrine is correctly understood. A word of caution is in order here. The word 'doctrine' is often used interchangeably with the word 'theory.' In common usage this interchangeability is generally permissible insofar as both terms are understood to be directive in nature and consist of rules of behavior or action under given circumstances. The discussion of the development of the philosophical concepts underpinning success in fighting modern wars should make evident the USMC "doctrine" does not fit the abstract rule-based theory model, which both Dewey and von Clausewitz so effectively decried if one is to live in the "real" world.

This analysis proceeds as follows:

- (1) The nature of contemporary war
- (2) Boyd's philosophical synthesis as a reflection of Dewey and von Clausewitz
- (3) The philosophical basis for fighting (and winning) modern wars
- (4) Dewey and von Clausewitz's philosophy in practice
- (5) Observations on the philosophical demands for victory

The Nature of Contemporary War

To proceed to the question of the applicability of the Dewey/von Clausewitz philosophy to contemporary, or modern, war one first must have a clear and workable concept of what is meant by "contemporary" or "modern" war. Critics of von Clausewitz claim that the General's thinking is outdated because his views reflect war as conducted in the early 19th century and, hence, cannot apply in our modern world. If he developed his views, the thinking goes, based on large armies on foot facing each other as representatives of well-defined political entities, then the concepts surely must fail in warfare using highly sophisticated weapons or in combat between forces with no clearly defined political state. While considered true that the *outward appearance* of warfare is certainly different than in the first decades of the 1800s, these critics are easily countered if the case can be made the *nature* of combat is, at the core, the same today as in the 19th century or, for that matter, as in the 3rd century BCE.

Contemporary war has multiple forms, few of which von Clausewitz could have possibly conceived. Dewey was certainly familiar, however, with some of the forms of contemporary war; for example, he had lived to see the advent of nuclear warfare and terrorism. War has long been described as a spectrum. This spectrum can be thought of as a continuum from low-intensity combat through an ever-increasing level of violence culminating in nuclear exchanges. Exactly where any particular type of war should be placed may be open for debate but the matter of concern for this dissertation is to discern whether war, in all forms, differs sufficiently to render the experiential, pragmatic philosophies of Dewey and von Clausewitz moot. As exemplars of the spectrum, a few specific examples of contemporary war found at various levels should suffice to address the question of whether war in general shares common philosophical underpinnings.

Nuclear war is perhaps the most feared of all potential modes of contemporary warfare but the most likely form is some variation of terrorism or low-intensity conflict. As this dissertation is being written, the world is grappling with terrorist organizations that have integrated themselves into the political processes of the state such as Hamas and Hezbollah while at the same time watching several revolutions and civil wars in such places as Libya, Ivory Coast, and Yemen among others. Still, military planners grapple with scenarios, which can have far reaching consequences for technologically developed societies; cyber-war and network-centric war are two such possibilities. Fourth

generation warfare (4GW) is an example many military thinkers embrace to characterize the current and likely future methods of combat. The philosophical question remains the same, however, regardless of which mode of warfare one is considering. Namely, do any or some of the potential modes of current or future combat negate the pragmatic philosophical concepts of Dewey and von Clausewitz as those concepts pertain to war and leadership?

Concern for 4GW and network-centric war often dominate the discussions concerning the constitution of contemporary war. These discussions imply that modern war is somehow different in kind from previous methods of war. For example, 4GW is so named because proponents envision modern war as a distinct from previous forms of war. Proponents, however, view contemporary war as an historical or evolutionary development. Antulio Echevarria describes this development. "In brief, the theory holds that warfare has evolved through four generations: 1) the use of *massed manpower*, 2) *firepower*, 3) *maneuver*, and now 4) an evolved form of *insurgency* that employs all available networks—political, economic, social, military—to convince an opponent's decisionmakers that their strategic goals are either unachievable or too costly." (Echevarria: v)

On first glance, the reader might surmise that 4GW appears to be a concise portrayal of modern war. Echevarria calls 4GW "a myth" because such wars represent nothing new in warfare and, from an historical perspective, all four generations of war are still, in one way or another, part of most, if not all, contemporary wars. That is, technology may change but the basic presumptions

concerning the *nature* of warfare remains little changed throughout time. As Max Boot has noted, “But in the final analysis, having the best technology is not enough to defeat the most ruthless terrorists. In fact, most of the expensive weapons systems being purchased by the U.S. and its allies are almost completely irrelevant to the war against terrorism. Smart bombs can be useful for killing the enemy once he is located. But figuring out who the enemy is, where he is, and what he is up to—that requires smart *people*.” (220)

Insurgency, the focal point of 4GW, shares all the attributes of war inherent in von Clausewitz’s philosophy of war. Critics of von Clausewitz either misunderstand his concepts or willfully mischaracterize them. Many military thinkers claim that war is no longer “Trinitarian” in the Clausewitzian sense. Recall, von Clausewitz saw war as a “wonderful trinity.” This trinity is “composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam; and of its element of subordination, as an instrument of policy, which makes it subject to reason alone.” (HP: 89) The first part of the trinity of war concerns the people, the second is the purview of the army and the general, and the last relates to the government and is the outcome of policy. All three of these parts depend on each other and, the General contends, to ignore any single spoke of the trinitarian wheel conflicts with reality.

Modern 4GW theorists claim contemporary insurgency no longer fits this Clausewitzian paradigm and imply, therefore, that the philosophical underpinnings of von Clausewitz's understanding of war no longer apply and are outdated and inappropriate for understanding war today. Echevarria, in countering Martin van Creveld's criticism of the General, correctly dispels this misconception and succinctly demonstrates the timelessness of the General's philosophy.

The fundamental problem with the idea of nontrinitarian war is that it does not understand the thing it purports to negate, that is, so-called trinitarian war. The concept of trinitarian war has, in fact, never existed except as a misunderstanding on the part of those who subscribe to the notion of nontrinitarian war. It resulted from van Creveld's misrepresentation of Clausewitz's "wondrous (*wunderliche*) trinity," a construct the Prussian theorist used to describe the diverse and changeable nature of war. Clausewitz portrayed the nature of war in terms of three tendencies, or forces: basic hostility, which if unchecked would make war spiral out of control; chance and uncertainty, which defy prescriptive doctrines and make war unpredictable; and the attempt to use war to achieve a purpose, to direct it toward an end.

Indeed, his portrayal appears accurate, for we find these forces present, in varying degrees, in every war, ancient or modern, traditional or otherwise. ...

These tendencies, as Clausewitz went on to explain, generally correspond to three institutions: the first to the populace, the second to the military, and the last to the government. However, he also noted, each of these institutions have taken various forms over time; we should not consider them only in terms of these three forms. The term "government," for instance, as Clausewitz used it, meant any ruling body, any "agglomeration of loosely associated forces," or any "personified intelligence." Similarly, the term military (*sic*) represents not only the trained, semi-professional armies of the Napoleonic era, but any warring body in any era. Likewise, Clausewitz's references to the

“populace” pertain to populations of any society or culture in any given period of history. Thus, the government can be a state, such as Prussia, or a nonstate actor, such as a clan or a tribe. In truth, the trinity consists of the actual *forces* or tendencies themselves, which are universal, and not the institutions, which are merely representations of those forces that would have been familiar to Clausewitz’s readers. He considers these tendencies themselves to be universal—common to every war—and, indeed, we find them at play in the war on terror.

As we can see, each of these tendencies in Clausewitz’s wondrous trinity remains alive and well, even in the war on terror, which is precisely the kind of conflict that scholars such as van Creveld wrongly refer to as “nontrinitarian.” Strictly speaking there is no such thing as trinitarian war because, as any review of history shows, the forces Clausewitz described are present in *every* war, not just the wars of nation-states. If they are present in every war, then the term must fall out as a discriminator. In other words, if the basis for making a distinction, any distinction, disappears, then the distinction itself also vanishes. It follows, then, that since there is no such thing as “trinitarian” war, *per se*, there can be no such thing as “nontrinitarian” war; the initial concept or idea has no exist before the idea that it negates can come into being. Nontrinitarian war is, therefore, nothing more than the negation of a misunderstanding. The proponents of 4GW failed to perceive this particular flaw in their reasoning because they did not review their theory critically; instead, they attempted to augment it with whatever ideas seemed in vogue at the time. (6-9)

Echevarria concisely depicts the essence of von Clausewitz’s philosophical foundation of war’s fundamental nature. In so describing the General’s concepts, he makes a strong case that war at *all* points in the spectrum fits the Clausewitzian archetype. Perhaps, viewing the Clausewitzian archetype as near the Platonic Form of War would not be far-fetched.

The accusation that von Clausewitz's philosophy only applies to wars between nation-states, and therefore not germane to contemporary wars of terrorism or insurgency, is misguided. The General certainly knew of these types of conflicts and he addressed them squarely in *On War*. In Book VI, Chapter XXVI, titled "The People in Arms," he proclaims,

In the civilized parts of Europe, war by means of popular uprisings is a phenomenon of the nineteenth century. It has its advocates and its opponents. The latter object to it either on political grounds, considering it as a means of revolution, a state of legalized anarchy that is as much a threat to the social order at home as it is to the enemy, or else on military grounds, because they feel that the results are not commensurate with the energies expended.

The first objection does not concern us at all: here we consider a general insurrection simply as another means of war—in its relation, therefore, to a popular uprising should, in general, be considered an outgrowth of the way in which the conventional barriers have been swept away in our lifetimes by the elemental violence of war. It is, in fact, a broadening and intensification of the fermentation process known as war.

...

By its very nature, such scattered resistance will not lend itself to major actions, closely compressed in time and space. Its effect is like that of the process of evaporation: it depends on how much surface is exposed ... like smoldering embers, it consumes the basic foundations of the enemy forces. ...

A general uprising, as we see it, should be nebulous and elusive; its resistance should never materialize as a concrete body, otherwise the enemy can direct sufficient force at its core, crush it, and take many prisoners. When that happens, the people will lose heart and, believing that the issue has been decided and further efforts would be useless, drop their weapons. On the other hand, there must be some concentration at certain points: the fog must thicken and form a dark and menacing cloud out of which a bolt of lightning may strike at any time. (HP: 479-481)

Von Clausewitz astutely realized that war comes in many forms. For his ideas to matter they had to apply to the fundamental nature of war and not specific instances or historical cases alone. The fundamental difference between von Clausewitz and Jomini rests in each man's fundamental understanding of what war is. Von Clausewitz saw war as ever-changing and fluid, subject to constant revision, while Jomini thought of war as relatively static and subject to historical analysis.

The Echevarrian analysis of von Clausewitz, relative to 4GW as given above, can easily be extended to all types of wars. Not only does this apply to terrorism and insurgency but, most certainly, this applies to the extremes of nuclear war and cyber-war as well. P. W. Singer captures this idea in relation to the use of high-tech, robots in contemporary wars, such as Iraq and Afghanistan.

Insurgencies are sometimes framed as an asymmetric battle between one side that depends on high-tech weapons and the other side that eschews them. This may have been true of battles in the past, where rifle- and machine-gun wielding imperialists took on tribes armed with spears, but it just isn't the case in modern war, including in Iraq. Instead, there is a sophisticated back-and-forth going on between the two sides in technology, the second reason why Iraq didn't end the role of unmanned technology in war. "We adapt, they adapt," says John Nagl. "It's a constant competition to gain the upper hand." Concur one of the robot makers at Foster-Miller, "There is a huge intellectual battle going on between the U.S. technology and the insurgents. (218)

This dissertation presumes, if the reader accepts the above analysis, the fact the Clausewitzian understanding of war applies to contemporary war as strongly as

to classical warfare between nation-states is self-evident. That is, the inherent nature of *all* wars fits the Clausewitzian philosophy.

Boyd's Philosophical Synthesis

Having established the pertinence of Clausewitz's philosophical conception of war to the contemporary understanding of war as a spectrum, the question remains whether the philosophical views of the General, and by extension those of Dewey, can be effectively incorporated into the actual environment of contemporary war—war as it really exists. Since Dewey and von Clausewitz exemplify the essence of pragmatism, their philosophies must have practical consequences—some goal-oriented usefulness in the *real* world. Recalling Stroh's characterization of James' pragmatism, "This means we must look to the future, since without a future there can be no practical consequences." (Stroh: 131) The *goal* of war is to win (fulfill the political objectives of the state or appropriate political body). The *usefulness* of the Deweyan/Clausewitzian philosophy can only be assessed if that philosophy can be, and is, used in the realm of actual military operations. To that end, I will show there is a philosophy that incorporates the Dewey/von Clausewitz philosophy that acts as a foundation for contemporary military action. The reader might rightly ask why a third philosophy is needed. The contention is for any philosophy to have value in life's actual environment, that philosophy has to be couched in terms that are, at least potentially, actionable.

For a military *ethos* to incorporate a meaningfully actionable philosophy that philosophy must have a firm foundation. Further, that foundation must lead to a concept for warfighting that is effective and will lead to success in combat. As both Dewey and von Clausewitz so trenchantly observed, rules and theories are certain to lead to failure. Such rules and theories cannot serve as guides to having meaningful experiences or being victorious or war. Unfortunately, until quite recently many, if not most, military services based warfighting guidance on these rule-driven theories. The best example that the pragmatic ideals thus far discussed have been translated into a “modern” philosophy that forms the basis for fighting in the contemporary world is that of the of the USMC. The Corps’ *ethos* of combat applies to all wars they may be called upon to fight.

The foundation for the USMC’s image of combat is a philosophy developed by the late John Boyd. This philosophy, as will be demonstrated, is a pragmatic one and reflects the concepts inherent in the Dewey/von Clausewitz philosophy discussed thus far. Colonel Boyd, a retired U.S. Air Force fighter pilot, made a name for himself as a pilot, commander and, most notably as the developer of the theory of energy maneuverability (E-M) in air-to-air combat.^{iv} Boyd developed novel approaches to air-to-air combat during the 1950s, found new maneuvers for aircraft that no others had tried before, and shook the world of air combat as well as the area of modern aircraft design with the completely radical E-M theory. These areas are not concerns for this dissertation but they are illustrative of how Boyd approached any and all issues he addressed. Boyd

epitomized the Deweyan aesthetic demands. The Colonel did not identify a problem, find a solution, and move on. He *lived* the problem. Problem solving became a continuous cycle of doing and undergoing. When Boyd announced a solution to a problem or let his theories see the light of day (the consummation), one could rest assured that he had gone through every conceivable aspect of the issue and knew every nuance and potential problem inherent in the solution or theory. In typical Deweyan fashion, his solution to one problem led immediately to a basis for evermore complex and challenging problems. From apparently simple individual fighter aircraft tactics, Boyd led himself to sequentially develop a philosophy of war that is being used today as the basis of winning contemporary wars of all types. This philosophy is the practical *application* of Dewey and von Clausewitz.

Boyd, perhaps one of the few contemporary polymaths, was in most of his areas of expertise also an autodidact. A voracious reader and “doer,” his methods and “theories” resulted not from simple academic musings but, rather, from intense investigation, testing, trying to find the underlying causes, more investigation, more testing, and so on until the method or concept was “ready.” As Robert Coram, when describing Boyd’s style, notes, “As word continued to spread about this new E-M Theory, the rank of those wanting to hear the brief increased. Now majors and lieutenant colonels and colonels asked for a session. If a superior officer congratulated Boyd on his brief, Boyd’s response was always the same: ‘Sir, I do my homework.’” (Coram: 163) This is certainly an

understatement; Boyd did much more than his “homework,” Boyd integrated himself into the very fabric of the “problem.”

Boyd retired from the Air Force in 1975 and began to question the causes of the United States’ defeat in Vietnam. To many of the company and field grade officers (lieutenants through colonels), the nation’s defeat hinged on outmoded thinking about the fundamental nature of war, thinking that relied on “lessons” from the last war instead of understanding war *qua* war. Boyd decided to address this problem. He realized he could not do this while in uniform since he believed the senior officers and high-level civilians who ran the military trapped themselves in rigid defeatist ideas. As von Clausewitz noted so presciently, dogma in thinking about war will inevitably lead to defeat. Boyd knew he had to be independent of all outside influences if he was going to solve “the problem of war” and avoid the contagion of institutional thinking. Like the earliest philosophers, “Boyd knew he had to be independent and he only saw two ways for a man to do this: he can either achieve great wealth or reduce his needs to zero. Boyd said if a man can reduce his needs to zero, he is truly free: there is nothing that can be taken away from him and nothing anyone can do to hurt him.” (Coram: 319)

Boyd began to address the problem from the perspective that had resulted in E-M Theory. “And while (Boyd’s closest associates) did not discuss it with him, they knew that Boyd was fortune’s child, that he had passed beyond the E-M Theory and was venturing into more rarefied heights. They sensed he was

about to give birth to his greatest work.” (Coram: 320) The Colonel wondered why those who had much more familiarity with science and mathematics had not discovered E-M Theory earlier. Boyd thought his ideas were self-evident and he could not understand why he could find solutions where others had failed. Boyd began to ponder the larger question of how humans think and make decisions.

Boyd incorporated philosophy with conceptual schema from science and history to create a philosophical template for war—not just specific wars but for *all* wars. His pragmatic philosophy progressed in two stages. First, he developed a grounding document called “Destruction and Creation” (Appendix I). The purpose of this philosophical discourse is to devise a concept for matching our mental images (concepts) to reality; more succinctly, how do we think? Boyd notes that survival depends this ability.

To comprehend and cope with our environment we develop mental patterns or concepts of meaning. The purpose of this paper is to sketch out how we destroy and create these patterns to permit us to *both shape and be shaped by a changing environment*. In this sense, the discussion also literally shows why we *cannot avoid this kind of activity if we intend to survive* on our own terms. *The activity is dialectic in nature generating both disorder and order* that emerges as a changing and expanding universe of mental *concepts matched to a changing and expanding universe of observed reality*. (Boyd: Appendix I) (emphasis added)

Boyd’s purpose statement is quintessentially Dewey’s aesthetic understanding. Man is shaped by, and simultaneously shapes, the environment. Survival depends on how the mental concepts so shaped match reality. The dialectic

requires a constant interchange of man and environment. Disorder and order are simply the doing, undergoing and consummation. How did Boyd arrive at this view?

Boyd isolated himself from his surroundings and assimilated everything that could address the ultimate problems he would undertake to understand. As Coram describes the process, “Christies’s phone might ring at 2:00 A.M. and Boyd would say, ‘I had a breakthrough. Listen to this.’ And without pause he would begin reading from Hegel or from an obscure book on cosmology or quantum physics or economics or math or history or social science or education. Christie thought Boyd had taken leave of his senses.” (319) Ultimately, Boyd reached consummation with the publication of “Destruction and Creation,” one of the very few things he ever published. Boyd spent over four years developing this eleven-page document that synthesizes the core concepts of Gödel’s Incompleteness Theorem, Heisenberg’s Uncertainty Principle and the Second Law of Thermodynamics. “Philosophers such as Jacob Bronowski sensed relationships among these disparate elements, but no one had ever linked all three, raised them to a higher level, and from them synthesized a new idea.” (Coram: 322) (Of interest is the fact Boyd’s earlier struggle with the Second Law of Thermodynamics is the catalyst that led to his groundbreaking E-M Theory. This is an exemplar of Dewey’s demand for continuity as a criterion for *an* experience.) The dialectic of Boyd with himself and with his closest associates led to “Destruction and Creation.”

The Colonel used the principles underscoring the three theories to show the relationship between observer and that which is observed (the environment) is in a constant state of change. Not only does the process change what is being observed but also this continual feedback shapes *how* the observer observes. That is, the observer's outlook changes. Boyd believed that when we *analyze* a process or happening we could break the process or event into its component parts and then make a deduction from those components. The other option is for the observer to take those component parts and to *synthesize* something new. "Boyd thought analysis could lead to understanding but not to creativity. Taken to the extreme, he thought analysis was an onanistic activity, gratifying only the person doing the analyzing. He said Washington was a city of the thousand analysts and no synthesizers." (Coram: 324) This view closely parallels von Clausewitz's understanding of "genius" as a person who can take the pertinent information from a "fog" in war and apply that information to a new, novel and, hopefully, correct solution to the problem at hand.

Boyd's oft-used example is a thought experiment intended to show the nature of creativity. He asks his audience to imagine four distinct domains (images) that can each be understood by examining its parts and their respective relations with one another. By examining the parts and their relations to each other, the domains are easily understandable. As Coram explains,

Boyd's four dimensions were a skier on a slope, a

speedboat, a bicycle, and a toy tank. Under “skier” were various parts: chairlifts, skis, people, mountain, and chalets. He asked listeners to imagine these were all linked by a web of relations, a matrix of intersecting lines. Under “speedboat” were the categories of sun, boat, outboard motor, water-skier, and water. Again, all were linked by the intersecting lines. Under “bicycle” were chain, seat, sidewalk, handlebars, child, and wheels. Under “toy tank” were turret, boy, tank treads, green paint, toy store, and cannon.

The separate ingredients make sense when collected under the respective headings. But then Boyd shattered the relationship between the parts and their respective domains. He took the ingredients in the web of relationships and asked the listeners to visualize them scattered at random. He called breaking the domains apart a “destructive deduction.” (Today some refer to such a jump as “thinking outside the box.” Boyd believed the very existence of a box is limiting. The box must be destroyed before there can be creation.) The deduction was destructive in that the relationship between the parts and the whole was destroyed. Uncertainty and disorder took the place of meaning and order. Boyd’s name for this hodgepodge of disparate elements was a “sea of anarchy.” Then he challenged the audience: “How do we construct order and meaning out of this mess?”

Now Boyd showed how synthesis was the basis of creativity. He asked, “From some of the ingredients in this sea of anarchy, how do we find common qualities and connecting threads to synthesize a new domain?” Few people ever found a new way to put them together. Boyd coaxed and wheedled but eventually helped the audience along by emphasizing, *handlebars, outboard motor, tank treads, and skis*.

These, he said, were the ingredients needed to build what he called a “new reality”—a snowmobile. (324-325)

This process is both Dewey’s “aesthetic” and von Clausewitz’s *coup d’oeil*. The required synthesis “must be continually refined by verifying its internal consistency and by making sure it matches up with reality.” (Coram: 325)

Dewey and von Clausewitz also saw this process of synthesis as continual until reaching temporary stability—only then to be continued out of the domain of

the stable back to the realm of the precarious. If we could have asked Boyd, hypothetically, what does one do next after synthesizing the snowmobile, he most likely would have responded that we must once again examine the parts and relationships in the milieu of the snowmobile's new environment. What else, he would demand, is possible in the yet unknown domain? Charles de Gaulle synopsised this view well when he observed, "If a commander is to grasp the essentials and reject the inessentials; if he is to split his general operations into a number of complementary actions in such a way that all shall combine to achieve the purpose common to every one of them, he must be able to see the situation as a whole, to attribute to each object its relative importance, to grasp the connections between each factor in the situation and to recognize its limits. All this implies a gift of synthesis ... As Napoleon said: 'The military leader must be capable of giving intense, extended, and indefatigable consideration to a single group of objects.'" (300)

Boyd's contribution is significant in that his philosophy is grounded in three fundamental physical laws that form a nexus for understanding the "new reality." "To make sure the new reality is both viable and relevant, Boyd said it must be continually refined by verifying its internal consistency and by making sure it matches up with reality." (Coram: 325) One must recognize, however, that the structure of Boyd's philosophy is a reprise of Dewey and von Clausewitz. Boyd used Gödel, Heisenberg, and the Second Law of Thermodynamics to form his philosophy. Gödel showed Boyd that the nature of

a system could not be determined from within the system itself. Any attempt to determine the characteristics of the system from within only leads to confusion. This is akin to von Clausewitz claim that only the *military genius* can see the nature of war and the genius can only do this if unencumbered from the “rules” which the system uses to define itself. This continual mismatch leads to Boyd’s “dialectical engine” which is, at base, a parallel to Dewey’s aesthetic experience, that is, the relationship between the individual and his or her environment is continually undergoing a unique “give and take.” Likewise, this relationship between man and the environment changes as a result of the mutual interaction of each with the other. Boyd developed this concept from Heisenberg’s Uncertainty Principle but this is nothing more than von Clausewitz’s observation that the forces in war are reactive in their nature. They are as living organisms and continually change as a result of the *living* reactions of the military with the environment and opposing forces. Finally, Boyd invoked the Second Law of Thermodynamics to show disorder, if left unchecked by outside force, increases its disorder. Both Dewey and von Clausewitz have made similar observations regarding unpredictability. In war, the best-laid plans lose their impetus once the engagement commences. Boyd may have been the first to synthesize this system from physical and mathematical principles, but the foundation of this philosophy is both Deweyan and Clausewitzian.

With this philosophical groundwork in place, the question for Boyd became one of determining how this philosophical foundation could be used to

successfully engage in war. Could this philosophy underpin a way to think about war in a new and effective way?

The Philosophical Basis for Fighting (and Winning) Modern Wars

Boyd's dialectic engine is an understanding parallel to Dewey's aesthetic experience and von Clausewitz's *coup d'oeil*. Thus, by determining that Boyd's "engine" leads to a philosophical basis for fighting and winning contemporary wars, the relevance of Dewey and von Clausewitz's pragmatic philosophies in contemporary war is likewise established. Boyd's dialectic engine produced a rich philosophical paradigm that should apply to all wars: ancient, modern, cyber, insurgency, terror, nuclear, chemical, and post-modern.

The basis for Boyd's warfighting philosophy rests on an "action" cycle commonly referred to as the "observe-orient-decide-act cycle," or more commonly, the OODA Loop. As is the case with von Clausewitz, a cursory reading leaves many people with a misunderstood or shallow view of what the author purports. A brief description of how Boyd developed the OODA Loop, and what the concept entails, illuminates the philosophy of winning and achieving victory in war.

Boyd, while applying his destruction and creation philosophy to aerial combat, conceived of "fast transients" as basis for individual victory in air-to-air engagements. He developed a briefing in which his final slide said, "He who can handle the quickest rate of change survives." (4 August 1976) While the briefing is technical in nature, Boyd incorporates his ideas from "Destruction and

Creation.” His technical discussion morphs quickly into ideas such as confusion, unpredictability, disorder, exploitation and ambiguity. Taking the idea of “quickest rate of change” as the arbiter of victory in a single air-to-air “dogfight,” the Colonel extends the concept to all war. The quickest rate of change concept is characterized as the fastest tempo. Tempo is not to be confused with speed. “Thinking about operating at a quicker tempo—not just moving faster—that the adversary was a new concept in waging war. Generating a rapidly changing environment—that is, engaging in activity that is so quick it is disorienting and appears uncertain and ambiguous to the enemy—inhibits the adversary’s ability to adapt and causes confusion and disorder that, in turn, causes and adversary to overreact or underreact. ... The briefing revealed that the central theme of Boyd’s work—a *time-based theory of conflict*—was beginning to take form.” (Coram: 328) Boyd often alluded to the ancient Chinese general and warrior, Sun Tzu, as one of the great minds of military philosophy. Sun Tzu offers a template for Boyd. “After that comes tactical maneuvering, than which there is nothing more difficult. The difficulty of tactical maneuvering consists in turning the devious into the direct and misfortune into gain. ... Let your rapidity be that of the wind, your compactness that of the forest. In raiding and plundering be like fire, in immovability like a mountain. Keep your plans dark and impenetrable as night and when you move, fall like a thunderbolt. ... He will conquer who has learnt the artifice of deviation. Such is the art of maneuvering.” (64-66)

Within a month after his air-to-air briefing Boyd authored a second briefing called “Patterns of Conflict.” He continued to refine this briefing in the ensuing years but the thrust remained constant—to define a philosophy for all war, from the individual combat to the conduct of the entire war at the political level. Coram asserts that many of the “building blocks” of Boyd’s theories are well known. The creative nature of the philosophy lies in the synthesis that Boyd gives to these building blocks. (Coram: 330) As is apparent, many of the building blocks are the conceptual ideas of Dewey and von Clausewitz (and many others as well).

The intent is to shatter cohesion, produce paralysis, and bring about collapse of the adversary by generating confusion, disorder, panic, and chaos. Boyd said war is organic, and compared his technique to clipping the nerves, muscles, and tendons of the enemy, thus reducing him to jelly. ... As Boyd studied German tactics, words such as *Schwerpunkt* and *Fingerspitzengefühl* became everyday expressions. Neither translates well. *Schwerpunkt* means the main focus of effort. On a deeper reading it is the underlying goal, the glue that holds together various units. *Fingerspitzengefühl* means fingertip feel. Again the fuller meaning applies to a leader’s instinctive and intuitive sense of what is going on or what is needed in a battle or, for that matter, in any conflict. (Coram: 333-334)

The organic nature of war and the *Fingerspitzengefühl* are Clausewitzian to the core. The General often refers to the forces of war as *organisms* while the definition of *Fingerspitzengefühl*, given by Coram, could easily double as a definition of von Clausewitz’s sense of *coup d’oeil*.

Using these concepts and the underlying philosophy of destruction and

creation, Boyd developed the OODA Loop as a conceptual device to envision the nature of all conflict. (This device not only has gained traction in contemporary military thought but has also been applied to business and sports as well.) The OODA Loop is often misread as a decision-making tool rather than a rich and complex philosophical construct for “getting inside the head” of any potential opponent. At first glance, many analysts believe the lesson of the OODA Loop is speed; that is, whoever acts the fastest wins. This is not so. While speed is important, the object is to act quickly enough to disrupt and confuse the enemy so that the adversary cannot react appropriately. If the actions of a military are predictable, such as those based on accepted theory or dogma, then speed is of little importance. The adversary will know what to expect and can prepare for most eventualities. If the adversary, however, has little idea of what to expect then his or her actions are quite likely doomed to failure. Coram describes the Loop thus,

It is true that speed is crucial, but not the speed of simply cycling through the Loop. By simplifying the cycle in this way, the military can make computer models. But computer models do not take into account the single most important part of the cycle—the orientation phase, especially the *implicit* part of the orientation phase.

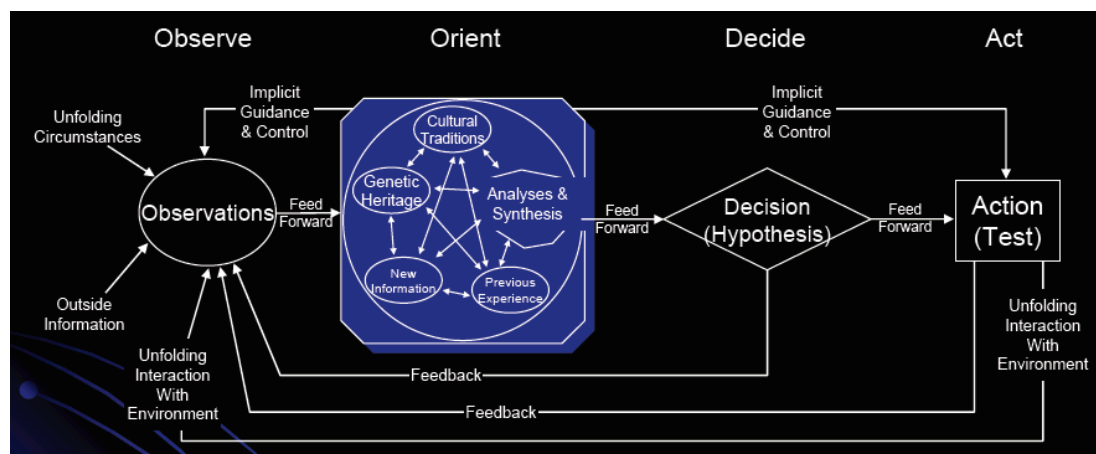
Before Boyd came along, others had proposed primitive versions of an OODA Loop. The key thing to understand about Boyd’s version is not the mechanical cycle itself, but rather the need to execute the cycle in such a fashion as to get *inside* the mind and decision cycle of the adversary. This means the adversary is dealing with outdated or irrelevant information and thus becomes confused and disoriented and can’t function.

Understanding the OODA Loop is difficult. First, even

though it is called a “loop,” it is not. A drawing of the Loop shows thirty arrows connecting the various ingredients, which means hundreds of possible “loops” can be derived. (335)

A brief look at the drawing to which Coram alludes illustrates the complexity of the Loop. Most observers concentrate on the “main” arrows on the central horizontal axis, the arrows connecting the *observe* → *orient* → *decide* → *act* phases of the Loop. These observers mistakenly presume the process to be linear. As is evident from the nature of the Loop, with its potentially endless possibilities, this decision process is entirely non-linear. No meaningful way exists for the Loop to lead to a rote process for action. To use the Loop as a tool is to mistake its usefulness.

To illustrate most simply, the following figure shows how to envisage the Loop’s complexity.



Sketch rendered by Chet Richards for web presentation.

(Osinga:13 July 2007)

Figure 1. *The OODA Loop*

The figure demonstrates the complexity of the concept. For the purposes of this dissertation, the first two phases are the most critical. If Boyd is correct that the object is to disrupt the adversary so he or she cannot make timely and meaningful decisions, then the “friendly” decision-maker must be able to complete the Observe and Orient phases more quickly than the adversary. Coram explains, “...when one has developed the proper *Fingerspitzengefühl* for a changing situation, the tempo picks up and it seems one is then able to bypass the explicit ‘Orientation’ and ‘Decision’ part of the Loop, to ‘Observe’ and ‘Act’ almost simultaneously. The speed must come from a deep intuitive understanding of one’s relationship to the rapidly changing environment. This is what enables a commander seemingly to bypass parts of the Loop. It is this adaptability that gives the OODA Loop its awesome power.” (335-336)

In Clausewitzian terms, the *military genius* has this rare ability to synthesize the proper action, *Fingerspitzengefühl*, through his or her *coup d’oeil*. This quality of the genius allows him or her to rapidly, almost instinctually, to grasp the multiple potentialities from any combat or war scenario and make the right decision regarding the best course of action. The only way this ability can be fostered is through continuous exposure to the appropriate environment of war. While Dewey does not demand an “increased tempo” for *an* aesthetic experience, the Boyd concept most certainly fits the conceptual construct of the Deweyan aesthetic. Note, the OODA Loop has no explicit decision schemes; all feedback is implicit which implies the ability to synthesize based on experience.

(See Figure 1.) The “Orientation” phase demands prior experience if one is to function within the Loop. This phase looks as if Boyd expropriated the entire phase from Dewey. Not only does the ability to orient one’s self demand appropriate prior experience but also that ability demands an understanding of one’s own, and the adversary’s, cultural heritage, genetic makeup, social conditions, and other such factors. Boyd in discussing the Loop observed, “Also note how the ‘loop’ (not just orientation) is an ongoing many-sided implicit cross-referencing process of projection, empathy, correlation, and rejection.” (Coram: 344) These words are the words of a philosopher, not those one would expect from a “mere” fighter pilot. This “form of thinking” is unique to military decision-making processes.

Boyd does not intend to offer a menu for how to make decisions. He is demanding a new way of thinking, one that fosters creativity through deconstruction and synthesis. The Colonel demonstrated through multiple examples that disrupting the enemy and “getting inside the adversary’s mind” not only leads to victory in combat but also such a tactic often leads to victory without having to commit to battle at all. “Boyd begins the section on maneuver conflict with two crucial words: ‘Ambiguity, deception ...’—the essence of maneuver tactics. This is General Patton’s approach to fighting the Germans. It is Muhammad Ali saying he will ‘float like a butterfly and sting like a bee.’” (Coram: 338) The lesson to be taken from Boyd’s briefing is that military leaders need to think in an entirely new way if they are to succeed. Boyd was

attempting to shake the “brass” out of its institutional complacency. The object was to develop leaders who thought about war in ways that were not “traditional,” ways that would lead to victory in any future war and avoid the intellectual anchor of trying to win “the last war.”

Boyd’s approach philosophy met with a great deal of skepticism and doubt from most of the entrenched leaders within the military and its civilian leadership. At the highest levels the feeling was, usually, to ask why one should follow this brash, philosophical colonel. After all, did not the high level “leaders” attain their positions because of their great knowledge and skill at planning and fighting wars? Change comes slowly in a bureaucracy. Not all, however, turned a deaf ear to Boyd’s “Patterns of Conflict.” Most of those who heard and accepted this “new” philosophy were junior and field grade officers as well as young congressional staffers. Few flag officers, generals and admirals, gave much consideration to the principles that were causing such a stir among the younger officers. A major exception was the Commandant of the Marine Corps, General A. M. Gray. The Commandant saw the paradigm shift in military thinking that Boyd’s philosophy represented. Incorporating that shift into the USMC ethos became one of General Gray’s ultimate concerns.

Dewey and von Clausewitz’s Philosophy in Practice

The philosophy of John Boyd incorporates the aesthetic concepts of John Dewey and the principles of war and leadership in Carl von Clausewitz’s philosophy of war. This section is intended to demonstrate that these views

have been incorporated into a practical application, which addresses combat in modern contemporary wars. This illustrative application suggests that those on the forefront of contemporary military thought consider Dewey and Von Clausewitz as germane today as in the past. By demonstrating the appropriateness of Boyd's philosophy to contemporary warfighting the case is made simultaneously that the philosophies of both Dewey and von Clausewitz are, by extension, important to modern military thought and lay the foundation for addressing modern combat in all forms.

Boyd "infiltrated" the USMC's educational system. He worked with instructors, majors and lieutenant colonels, to teach them the lessons of destruction and creation, *Schwerpunkt*, *Fingerspitzengefühl*, fast-transients, OODA Loops—all new approaches to thinking. Boyd took part in the classes at Marine Corps Base Quantico, where officers are trained. The classes incorporated the ideas of the "Patterns of Conflict" and led to new ways of looking at combat. The doctrinal, rule oriented, methods of operations gave way to philosophical concepts about how to think and how to conduct operations. This signaled a new paradigm for understanding war. Yet, this shift in thinking offered those who could understand and incorporate this non-traditional mode of looking at war an opportunity to win *any* battle (or war), not just those of the last campaign.

Word of the ideas of this iconoclastic, retired Air Force colonel began to filter through the Corps. Eventually, the future Commandant of the Marine

Corps, General Gray, heard these ideas as a colonel and became a “believer” in the radical new wave of military thought and philosophy. This adherent of Boyd’s would eventually become instrumental in changing the military mind-set regarding contemporary war.

Boyd, echoing both Dewey and von Clausewitz, adamantly championed the decision process’s implicit nature. Explicit guidance, or rule-based decisions, is anathema to success and ultimate victory. Boyd demanded the intuitive at the expense of directions. A critical look at his concept leads to an obvious parallel; the Colonel is giving a template for the *military genius* of von Clausewitz. Look for multiple solutions and use intuition—based on prior experiences and understandings—to choose the best or most probable successful action. Free play exercises based on these ideas replaced the set-piece problem oriented scenarios that had historically been used at Quantico. “Anything goes” became the mantra. Upstart officers who failed to “follow the rules” upset those traditional approaches during exercises. Maneuver became the watchword; focus on the enemy instead of equipment and terrain became the norm. The Marines took this training to heart. Gen. John W. Vessey, Jr., USA, Chairman of the Joint Chiefs of Staff during the assault on Grenada in 1983 asked, “We have two companies of Marines running rampant all over the northern half of this island, and three Army regiments pinned down in the southwestern corner, doing nothing. What the hell is going on?” (Quotes: Web) What was “going on” was maneuver warfare based on the principles of the OODA Loop. Get inside the

head of the enemy and cycle through the Loop to disrupt his or her ability to function. This can only be done if the commanders have a developed sense of *coup d'oeil* gained through previous meaningful experiences.

Boyd's philosophy became the official conceptual underpinning of warfare for the Marine Corps in 1987 with the publishing of Fleet Marine Field Manual 1 (FMFM 1) at the behest of Commandant Gray. The number of the manual is significant because, unlike most military manuals that carry the next sequential number to indicate a continuation of the process, FMFM 1 indicates a brand new beginning for the Corps. Gray himself directed the new manual carry the number 'one.' The official title of FMFM 1 is *Warfighting*, thereby indicating the official mission of the Marines. Nonetheless, the thinking is all-new. Essentially, the document is Boyd's philosophy. FMFM 1 is not a "how to" manuscript but rather a treatise on how to orient one's thinking. FMFM 1 became mandatory reading for all Marines, both officer and enlisted. In 1997, the USMC issued a revised version of *Warfighting*, Marine Corps Doctrine Pamphlet 1 (MCDP 1). This is the current doctrinal exposition of the Corps. MCDP 1 does retain the number 'one' as a designation and the title, *Warfighting*, also remains unchanged. This revision is an amplification of FMFM 1 and remains true to Boyd's philosophy.

A review of the table of contents of MCDP 1 is instructive. (Appendix II) With few exceptions, the document is a reprise of von Clausewitz's ideas in modern guise. The construct is eerily similar to *On War*. The subsections of Chapter 1,

"The Nature of War," are titled,

- War Defined—
- Friction—
- Uncertainty—
- Fluidity—
- Disorder—
- Complexity—
- The Human Dimension—
- Violence and Danger—
- Physical, Moral, and Mental Forces—
- The Evolution of War—
- The Science, Art, and Dynamic of War—
- Conclusion

Each of these subsections discusses war in Clausewitzian terms. For example, in

"War Defined," MCDP 1 states

War is a violent clash of interests between or among organized groups characterized by the use of military force. These groups have traditionally been established nation-states, but they may also include any nonstate group—such as an international coalition or a faction within or outside of an existing state—with its own political interests and the ability to generate organized violence on a scale sufficient to have significant political consequences.

The essence of war is a *violent struggle between two hostile, independent, and irreconcilable wills, each trying to impose itself on the other*. War is fundamentally an interactive *social process*. Clausewitz called it a *Zweikampf* (literally a "two-struggle") and suggested the image of a pair of wrestlers locked in a hold, each exerting force and counterforce to try to throw the other. War is thus a *process of continuous mutual adaptation*, of give and take, move and countermove. It is critical to keep in mind that *the enemy is not an inanimate object to be acted upon but an independent and animate force with its own objectives and plans*. While we try to impose our will on the enemy, he resists us and seeks to impose his own will on us. Appreciating this dynamic interplay between opposing human wills is essential to understanding the fundamental nature of war.

The object in war is to impose our will on our enemy. The means to this end is the organized application or threat of violence by military force. The target of that violence may be limited to hostile combatant forces, or it may extend to the enemy population at large. War may range from intense clashes between large military forces—sometimes backed by an official declaration of war—to subtler, unconventional hostilities that barely reach the threshold of violence.

Total war and perfect peace rarely exist in practice. Instead, they are extremes between which exist the relations among most political groups. This range includes routine economic competition, more or less permanent political or ideological tension, and occasional crises among groups. The decision to resort to the use of military force of some kind may arise at any point within these extremes, even during periods of relative peace. On one end of the spectrum, military force may be used simply to maintain or restore order in civil disturbances or disaster relief operations. At the other extreme, force may be used to completely overturn the existing order within a society or between two or more societies. Some cultures consider it a moral imperative to go to war only as a last resort when all peaceful means to settle disagreements have failed. Others have no such hesitancy to resort to military force to achieve their aims. (3-5)

Von Clausewitz himself could have written this definitive introductory section to *Warfighting*. This section demonstrates the philosophical nexus between the forefront of contemporary military thought and the concepts of history's foremost military philosopher.

Almost every section of MCDP 1, addresses some philosophical aspect of Dewey, von Clausewitz, or the synthesis of Boyd. For the purposes of this section of the dissertation, noting the appropriation of these three philosophers into the central document of, arguably, the world's most elite military force is sufficient to corroborate the initial claim that the philosophies of Dewey and

von Clausewitz are applicable in today's contemporary sphere of war. The basis of the conceptual framework of the Marine Corps' philosophy is that the philosophy be applicable in *all* types of wars. The question at the beginning of this chapter asked whether such a philosophy, one that applies across the spectrum of contemporary war, could and does exist. MCDP 1 addresses this query directly in Chapter Two, "The Theory of War."

THE SPECTRUM OF CONFLICT

Conflict can take a wide range of forms constituting a spectrum which reflects the magnitude of violence involved. At one end of the spectrum are those actions referred to as military operations other than war in which the application of military power is usually restrained and selective. Military operations other than war encompass the use of a broad range of military capabilities to deter war, resolve conflict, promote peace, and support civil authorities. At the other end of the spectrum is general war, a large-scale, sustained combat operation such as global conflict between major powers. Where on the spectrum to place a particular conflict depends on several factors. Among them are policy objectives, available military means, national will, and density of fighting forces or combat power on the battlefield. In general, the greater this density, the more intense the conflict. Each conflict is not uniformly intense. As a result, we may witness relatively intense actions within a military operation other than war or relatively quiet sectors or phases in a major regional conflict or general war.

Military operations other than war and small wars are more probable than a major regional conflict or general war. Many political groups simply do not possess the military means to wage war at the high end of the spectrum. Many who fight a technologically or numerically superior enemy may choose to fight in a way that does not justify the enemy's full use of that superiority. Unless actual survival is at stake, political groups are generally unwilling to accept the risks associated with general war. However, a conflict's intensity may change over time. Belligerents may escalate the level of violence if the original means do not achieve the desired

results. Similarly, wars may actually de-escalate over time; for example, after an initial pulse of intense violence, the belligerents may continue to fight on a lesser level, unable to sustain the initial level of intensity.

The Marine Corps, as the nation's force-in-readiness, must have the versatility and flexibility to deal with a situation at any intensity across the entire spectrum of conflict. This is a greater challenge than it may appear: Military operations other than war and small wars are not simply lesser forms of general war. A modern military force capable of waging a war against a large conventional force may find itself ill-prepared for a "small" war against a lightly equipped guerrilla force. (26-28)

The entire spectrum of war is encompassed in this document. A proposition of this dissertation is that the philosophy incorporated into MCDP 1 is both Deweyan and Clausewitzian, as synthesized by Boyd and the Marine Corps, and that document represents a prime example of those pragmatic philosophies' usefulness in contemporary wars of all types.

Observations on the Philosophical Demands for Victory

Having established that the underlying philosophical concepts of Dewey, and von Clausewitz—so well synthesized in Boyd's work and given concrete form in USMC doctrine—do apply to contemporary warfare, the reader is right to conclude these concepts are timeless. These concepts are not directed at any specific type of war but, rather, are predicated on an existential view of human nature and how man sees him or her self in the world. Dewey tells us how we must participate in our relationship with the environment if we are to fully benefit fully from our experiences. This participation defines Dewey's aesthetic experience and how one becomes a

live creature. Von Clausewitz understands this idea as that idea applies to the realm of war. The General extends the notions of *undergoing* meaningful experience, and continual immersion in the art of and practice for war, to develop the concept of the *military genius*. *Live creatures* and *military geniuses* think, and understand the world, in ways that allow total immersion in the possibilities that experience offers. To win in combat, the genius must see and grasp the course of action that offers the best (most probable) opportunity for victory. Victory will most often accede to the commander who sees the potential paths to success and acts most quickly on the one most likely to attain the goal. This ability is timeless.

History is replete with examples of commanders who have had this ability and used it well. Hannibal's victory at the Battle of Cannae (216 BCE) exemplifies the Clausewitzian genius. Hannibal is said to have never lost a battle but his victory at Cannae was particularly stunning. This battle, believed to be the most lethal single battle in history, demonstrates the concepts illuminated in this dissertation. Before describing the battle as an exemplar of the philosophy thus far discussed, a brief deconstruction of Hannibal as a leader, offers insight into what Dewey and von Clausewitz require in the *military genius*, or *live creature*.

In terms of psychological and philosophical make-up, Hannibal resembles Dewey, von Clausewitz and Boyd, as well. All of these men were

classic models of the fully involved individual. These men rarely had time for themselves and they *lived* the lives of which they so passionately espoused.

Of Hannibal, Robert L. O'Connell says, "The personal details that do remain mostly form an image of a generic martial workaholic. Livy, eying him through the lens of his own country's military conventions, depicts him as a good man with a sword, fearless in combat, oblivious to physical discomfort, sleeping on the ground amidst his men, sharing their hardships, eating for sustenance, not pleasure." (84) This description parallel's von Clausewitz in his demand for the genius to be not only competent in combat but also hardened to physical deprivations and have an abiding concern for the welfare of his or her troops. Understanding what the men and women at arms experience, aside from being a prime requisite for command, can only come from the *lived* experiences of one who has been molded in combat. As Lord Moran (Dr. Charles McMoran Wilson) so eloquently states,

A friendly critic has expressed fear that the soldier who has not been seasoned by battle may be discouraged by all this fulminating against the iniquity of war. The idea is to hide from him what war is really like until he finds it out for himself. It would be as reasonable to keep the medical student away from disease because some may become a little too introspective and get it into their heads that they themselves are suffering from the same malady. I have already warned the reader that this book is a record of changing moods; sometimes fresh from some more personal loss I have written as though I were a pacifist and war was sheer waste, sometimes it is plain that I held war to be the ultimate test of manhood. Besides, I will not tamper with the testimony it carries, however badly it may have worn with time. It is well that those who command men in war—and it is for them that I

write—should have known such moods, if they recognise them for what they are, that they may the better detect them in others. *The imaginative man in war pays a price which is not exacted from his more stolid brother, but his men are the more ready to follow his example when they divine that he has read their secret thoughts.* (Moran: 46-47)(emphasis added)

Hannibal lived, fought, and suffered with his troops. He has read their secret thoughts. As Dewey and von Clausewitz demand, he had, and shared with his troops, a continuous flow of meaningful combat experiences.

Likewise, *thinking ahead* of the enemy and disrupting the adversary's plans were always part of Hannibal's tactical efforts. "His capacity for trickery was endless. Whether escaping from an apparently hopeless trap, or springing one on a hapless foe, he always seemed to concoct the unexpected and employ it to his own best advantage. In the case of the Romans, *he proved particularly adroit in maneuvers prior to battle, turning their instinctive aggressiveness against them and fighting only where he, not they, chose.*" (O'Connell: 87) (Emphasis added) This describes the ability of a genius to see through the fog of war and extract what is necessary for victory. Von Clausewitz certainly demands this ability, *coup d'oeil*, of the genius. O'Connell's characterization of Hannibal shows the ability to relate to the environment that is foundational to Dewey's aesthetic experience (or Boyd's destruction/creation synthesis model).

Von Clausewitz is adamant that the commander's *will* is paramount in maintaining a disciplined fighting force and that only his or her *will* is capable of keeping an army prepared for battle. The General proclaims,

But as soon as difficulties arise—and that must always happen when great results are at stake—then things no longer move of themselves like a well-oiled machine, the machine itself begins to offer resistance, and to overcome this the Commander must have great force of will. ... As the forces in one individual after another become prostrated, and can no longer be excited and supported by an effort of his own will, the whole inertia of the mass gradually rests its weight on the Will of the Commander: by the spark in his breast, by the light of his spirit, the spark of purpose, the light of hope, must be kindled afresh in others: in so far only as he is equal to this, he stands above the masses and continues to be their master ... (OW: 144)

Compare this passage with O'Connell's description of Hannibal.

Without doubt he possessed the best army that ever fought under a Carthaginian standard, but his troops won in large part because Hannibal was their leader. Not only was he a master at using each combat component to maximum advantage, but it is evident that his inspirational example was central to elevating the performance of all. During the entire time they were together in Italy, immersed in what frequently must have amounted to a litany of privation, there was not a single incident of truly mutinous behavior—an amazing record for any Carthaginian army, and one that Scipio Africanus and the notoriously well-disciplined Romans could not match. (86)

Hannibal is an exemplar of the *will* required for Clausewitz's *military genius*.

The Battle of Cannae demonstrates this genius in action. Hannibal at Cannae, vastly outnumbered by the Roman legions, found his Carthaginians facing one of the few times in which the enemy determined the field of battle. Although

historians disagree on the exact size of the opposing forces, Adrian Goldsworthy estimates the Romans had 80,000 infantry and 6,000 cavalry to face the Carthaginians 40,000 infantry and 10,000 cavalry. (200) The Romans chose to deploy their legions between the River Aufidus on the right flank and higher ground on their left flank. The strategy was to use these natural boundaries to prohibit an end run by Hannibal's cavalry and to keep the fighting confined to a relatively narrow front. With their vastly superior numbers the Romans intended to march directly against Hannibal's weaker forces and, through sustained combat win the battle through attrition. Hannibal quickly understood the Roman plan and devised a masterful counterplan. He used his one area of superiority, his cavalry, to great advantage. Likewise, he used deception to array his forces for the eventual destruction of the Romans.

The initial deployment of forces saw the Romans massed in three tiers of infantry facing Hannibal's army grouped in units of a few hundred soldiers per group. Hannibal arranged these forces in a convex pattern in front of the Romans. On his left flank, he arranged his light cavalry, which he "overloaded" to outnumber the opposing Roman cavalry. On his right he arrayed the remainder of his horsemen. Behind his main force of infantry he placed two units of Libyan (African) infantry, but instead of using these units as a "second tier" to fill in when the infantry at the front needed replacements, Hannibal placed the Libyans on the left and right flanks of the battle areas. By placing these units as he did, historians surmise that their deployment was probably

unknown to, or well hidden from, the Roman commanders, Paullus and Varro. "Hannibal had rightly guessed that the main Roman effort was to be made in the centre and had adjusted his deployment and issued orders accordingly. His plan was to use the enemy's own strength against him ..." (Goldsworthy: 207-208)

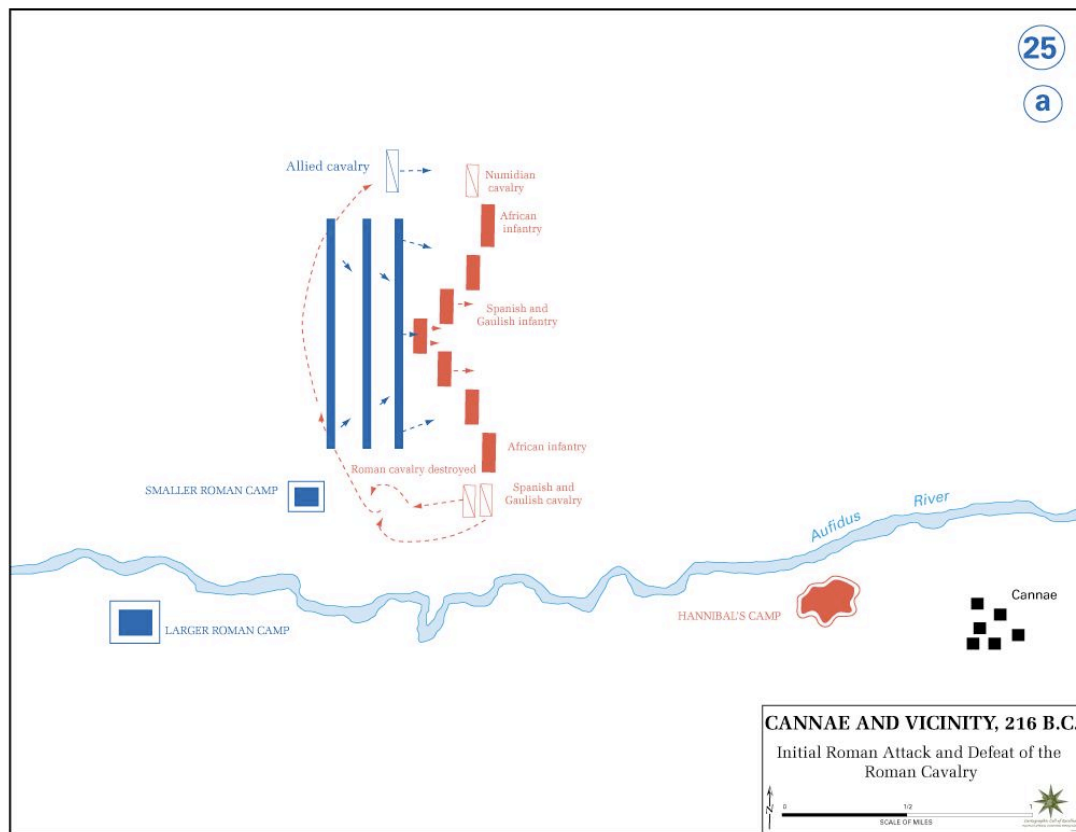
Fighting commenced with Hannibal's cavalry, under the command of Hasdrubal, on his left, engaging the cavalry on the Roman right. "It is unclear how much advantage Hasdrubal had from his numbers, for the confined space between the infantry centres and the river may have prevented him from bringing them to bear. It may be that the Roman cavalry had got used to being beaten by the Punic horsemen as the latter had to winning. In hand-to-hand combat confidence was often of greater importance than numbers or equipment. The Romans fled, but many found that their escape was cut off by the river and were slaughtered by their exultant opponents. ... Before it was finished, the heavy infantry had met in the centre." (Goldsworthy: 209)

Figure 2 (page 210) depicts, cartographically, the deployment of forces for the first stage of the battle. Upon seeing the destruction of their cavalry on their right flank, the Romans attacked *en masse* with their infantry in the center. The Punic warriors fought the advancing Romans but slowly fell back in the face of the advancing legions. As they slowly moved backwards the convex arrangement of Hannibal's forces gave way to a convex front. This move to the rear was not a classic retreat but rather a deceptive move to lure the Romans

into a position from which they could not retreat and from which victory could only be realized through complete destruction of the Carthaginians.

Once the Romans understood that they had moved into the convex “bowl” so cleverly devised by Hannibal, there was no turning back; their army was too concentrated to effect a retreat. By the time they realized their plight, Hannibal’s cavalry had swept behind the Roman lines and commence an attack from the rear. At the same time, the two units of Libyan infantry joined the battle and attacked the flanks of Roman forces. The entire Roman army was now effectively surrounded and, because of their concentrated mass, could not bring the bulk of their forces to bear against the Punic warriors. To effect complete victory, Hannibal’s army continually attacked the Roman periphery until the legions were destroyed. Figure 3 (page 211) shows the arrangement of forces after the main forces engaged each other.

BATTLE of CANNAE

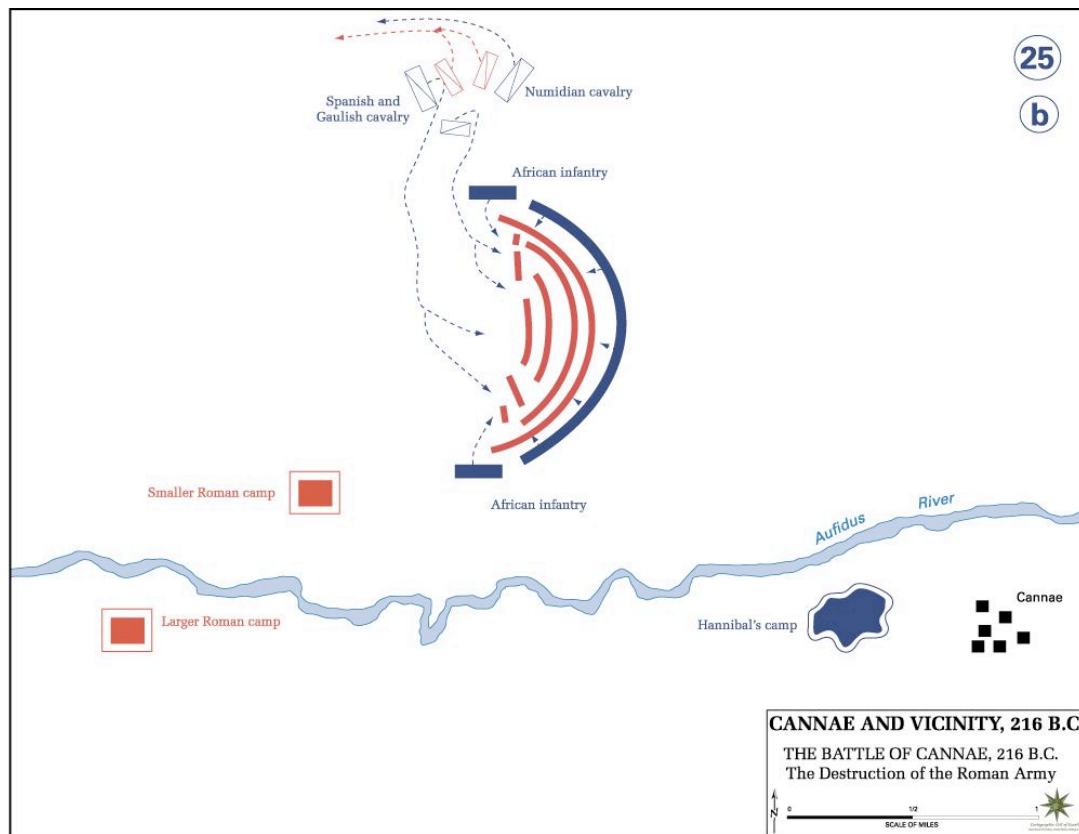


(Blue forces are Roman/Red forces are Punic) (Ancient Times: Web)

Figure 2- Initial Roman Attack and Defeat of the Roman Cavalry

Cannae is believed to be the deadliest single day of battle in history. While Hannibal is thought to have lost 4,700 troops (approximately 11.5% of his forces), the Romans are estimated to have lost between 48, 200 (Livy) and 70,000 (Polybius), or between 62% and 87% of their forces.

BATTLE of CANNAE



(Blue forces are Roman/Red forces are Punic) (Ancient Times: Web)

Figure 3- Destruction of the Roman Army

The example of Cannae is timeless. Hannibal learned from meaningful experience in combat. His experiences were aesthetic in the Deweyan sense. He gained from the uncertainty of combat and he lived the life demanded by von Clausewitz for the development of a *military genius*. Hannibal's "inner eye" enabled him to ascertain quickly the intentions of the enemy and to devise a response before the adversary even understood what was happening to them.

He used speed, deception and cunning to win the day. His forces were prepared and Hannibal, because he had lived with them daily in their privations and victories, knew the minds of his men. He lived a philosophy that still resonates for military leaders today. T. E. Lawrence encapsulates the spirit of Hannibal, the genius, “Nine-tenths of tactics are certain and taught in books: but the irrational tenth is like the kingfisher flashing across the pool, and that is the test of generals. It can only be ensued by instinct, sharpened by thought practicing the stroke so often that at the crisis it is as natural as a reflex ...” (285) This is what von Clausewitz demands of the *military genius*.

Hannibal, as representative of the philosophy embraced and championed in the dissertation, might seem an odd choice to exemplify that philosophy in contemporary war. If, however, the point has been sufficiently made that all war, by nature, does not change temporally then any commander who can be considered a *military genius* can stand as a prototypical exemplar for *all* geniuses.

Many who claim war today is fundamentally different than in the past must make the case that humans are somehow no longer part of the equation; machines will be able to fight independently and decide the outcome of future conflicts. This is not at all clear. Singer makes this compelling and cites a story by author and philosopher, Arthur C. Clarke.

Arthur C. Clarke may have been the science fiction writer behind *2001* and HAL the evil supercomputer, but one of his most militarily instructive stories is called “Superiority.” Set in

a distant future, the story is written from the perspective of a captured military officer, who is now sitting in a prison cell. He tries to explain how his side lost a war even though it had the far better and newer weapons.

“We were defeated by only one thing—by the inferior science of our enemies,” the officer writes. “I repeat, by the inferior science of our enemies.” Clarke’s future officer explains that his side was seduced by the possibilities of new technology. It created a new doctrine for how it wanted war to be, rather than how it turned out. “We now realize that this was our first mistake,” he writes. “I still think it was a natural one, for it seemed to us that all our existing weapons had become obsolete overnight, and we already regarded them as almost primitive.”

While his side builds around ever more complex technologies, the enemy keeps on using the same, seemingly outdated but still effective weapons and strategies. When war comes, it doesn’t play out how the officer hopes. The side with technologic superiority can’t figure out how to apply its new strengths, while the inferior side takes advantage of all its enemy’s new vulnerabilities, eventually winning the war.

Many think that this problem of “superiority” will be a central challenge to the American military in the future. (212)
(Emphasis added)

Von Clausewitz scholar, Stephen J. Cimbala echoes this view, “... John Arquilla and others have shown how information warfare does not necessarily favor high-technology states; netwar and other information based strategies may be used by state and nonstate actors to exploit the cultural and societal vulnerabilities of the United States and other economically developed democracies. The expectation of an information-rich battle environment for our side and an information-poor one for the enemy may itself be a source of considerable friction. The central concerns of these studies, in my judgment, are very much in the spirit of Clausewitz’s understanding of war and politics related

to war.” (12) Von Clausewitz was aware that the technology and forces of the state had to contend with irregular forces and could unseat a much more powerful adversary. “In two courses at the new War College, Clausewitz lectured on the war of detachments, raids, and ambushes, the so-called little war, its relation with conventional operations on the one hand, and guerilla warfare on the other.” (Paret: 97)

Contemporary war may, or not, involve highly sophisticated weapons. Nonetheless, forces must still engage one another physically if victory is to be assured. Short of obliterating a country or population through genocidal actions, an enemy cannot be subdued from a distance. The world’s recent and current wars are no different in kind than wars that have taken place in the past. All involve some sort of confrontational activity between live human beings. Iraq, Afghanistan, Libya, Ivory Coast, Israel-Palestine, Bosnia-Serbia, Somali Pirates, and Terror: all involve some sort of combat. As noted, cyber-war and 4GW may be a fiction because future wars need not be fought on the terms dictated by the technologically superior forces.

Future wars, like wars from antiquity onward, will require human interaction between opposing sides. Victory does not take place in a vacuum. The nature of victory may change depending on the changing political goals of the warring actors. The fundamental nature of the combat does not, however, change. Yes, new weapons may be employed but the basic element will remain man. Men and women will assuredly fight the next war—just as men and

women have fought all the wars in the past. The philosophy of Dewey and von Clausewitz remains intact.

CHAPTER VI

CONCLUSION: THE AESTHETIC VERDICT ON WAR

This dissertation confirms war as the zenith of aesthetic experience. The treatise demonstrates the pragmatic nature of war through explication of Dewey's aesthetic philosophy. Likewise, the coherency of von Clausewitz's philosophy parallels Dewey as it too leads to complete development, or flourishing, of the individual in a complex, ever-changing world. Von Clausewitz sets his philosophy in the context of war, but his philosophy transcends that milieu. The timelessness of the General's philosophical concepts guarantees the appropriateness of these concepts in today's inconstant world. To exemplify this point, this paper applied von Clausewitz's concepts to the range of contemporary wars in which the demands on modern warriors are often perceived as qualitatively different from demands placed on individuals in the armies of the early 1800s. This perception lacks credibility and, since the *methods* and *technologies* of war are in continuous flux while the basic *nature* of war remains unchanged, the germane nature of the General's philosophy to contemporary times remains unsullied and follows logically. Rather than simply asserting that the concepts of these two philosophers are germane in the modern, contemporary context of war, this dissertation shows how modern military thinkers actually employ the Clausewitzian philosophy as a basis for fighting in today's environment. As an exemplar, the current doctrine of the

United States Marine Corps is offered as a template of the philosophy of von Clausewitz and, by extension, Dewey.

The narrative of world history, as noted at the beginning of this dissertation, can be envisioned as a narrative of war. War defines cultures and individuals. The first arc of this treatise examined the *nature* of war and what the philosophy of that nature entails for commanders and those who aspire to top military leadership positions. The genesis of this examination centered on John Dewey's concept of experience and his philosophy of the aesthetic. For Dewey, the way one forms a relation with the environment determines the quality or meaningfulness of any experience. Only through a continual cycle of *doing* and *undergoing* can the individual claim to have entered into the requisite intense relationship with the environment. This relationship changes both the individual and the environment throughout the life of the relation until a stable condition exists. This condition represents a *consummation* of the experience but, notably, not a condition of finality. Upon consummation, the experience becomes bedding for future experiences. This cycle is continuous and, if appropriately undergone, represents the aesthetic. Dewey understood that not all experiences become aesthetic. To have *an* experience—that is, an experience of an aesthetic nature—requires full and active participation by the individual and must be a continuous “give and take” relation between individual and environment. If the process short-circuits prior to consummation, the event (experience) cannot be called aesthetic. Only through an aesthetic life can an

individual be fully actualized. Dewey refers to the person who has fully participated in life as a *live creature*. The *live creature*, in Dewey's parlance, offers a lens through which to view von Clausewitz's philosophy, especially as that philosophy demands a certain kind of existential status for his model of the individual similarly fully engaged in the world ... that would be the *military genius*.

The second arc demonstrated von Clausewitz's philosophy in the development of the ultimate commander—the *military genius*. Von Clausewitz visualized the *military genius* as the individual who existed totally in the environment of war. He scrutinized and appraised those aesthetic, ethical and practical qualities needed to make the successful leader and commander. This genius develops as a product of the nature of his or her experiences in combat and participation in the understanding and development of the political objectives of the state (or the political entity responsible for hostilities). A full interpretation and elucidation of the General's philosophy established the integral connection with the pragmatism of Dewey. The aesthetics of Dewey and the proper experience of war, as von Clausewitz conceived of those meaningful experiences, describe the real world and the players' interactions and relations with the environment. The next aspect of the framework built on common threads of each philosophy to establish the integral nature of each. The nexus of the two philosophies showed little conceptual disparity between the two. Specifically, the threads examined were: (1) the aesthetic, (2) continuity, (3)

uncertainty and friction; the organism, (4) theory and practice (or the abstract and the real), (5) art and science, (6) existence as a social construct, and (7) the *live creature* and the *military genius*. Both philosophers incorporated these threads to develop concepts of man fully engaged in his or her environment. This dissertation united these threads into a coherent whole. At the core of each philosophy remains a similar construct for the complete, integrated individual—the *live creature* and the *military genius*.

Finally, applying the Deweyan overlay to von Clausewitz's philosophy, this discourse addressed the question of whether von Clausewitz's philosophical view of war and leadership appropriately applies in today's world, especially to contemporary warfare. To determine the pertinence of the Dewey/von Clausewitz view to contemporary war, this treatise invoked a current synthesis of the ideas of these two philosophers. This synthesis, a philosophy for war developed in the late twentieth century by John Boyd, incorporated philosophical foundations espoused by von Clausewitz and Dewey.

Like Dewey and von Clausewitz, Boyd develops both a conceptual framework for thinking and a creative synthesis derived from one's experience with the environment. Often couched in terms that appear different from those of either Dewey or von Clausewitz, Boyd addressed most of the same issues faced by the two philosophers. More importantly, Boyd applied the concepts of creative synthesis—akin to Dewey's aesthetic and von Clausewitz's "inner eye"—to develop a "complete" philosophy of war. Boyd, like von Clausewitz,

adamantly claimed his philosophy not to be a theory of war but, rather, a philosophy of how to *think about* war. Boyd synthesized many of the philosophical concepts of Dewey and von Clausewitz in his two major works, “Destruction and Creation” and “Patterns of Conflict.” The Colonel incorporated the concepts of Dewey and von Clausewitz to create the link from his own philosophy to a practical and applied use in contemporary warfare. Once Boyd established this link, the claim became obvious that the philosophy of Dewey and von Clausewitz is appropriately germane to modern contemporary warfare.

The range of wars being fought today—and those that may be conceived by the world’s most creative military thinkers—covers the spectrum from small group, non-state activities—such as terrorist actions—to “all-out” thermonuclear exchanges. To logically assert a particular philosophy as relevant to contemporary war requires a common element that inheres in *every* conceivable type of war. After examining a subset of types of modern wars, this dissertation concludes that the *nature* of war remains unchanged from antiquity until today. To claim victory in any military conflict still requires “boots on the ground.” Consequently, modern war does not represent a *conceptual* paradigm shift but, rather, reaffirms that war today continually evolves while retaining its basic *nature* throughout the process of development. Having determined the conceptual static” nature of war, establishing that the philosophy of Dewey and von Clausewitz can practically apply to war’s inherent nature remains as the

final determinant for the claim of relevance of these philosophies to modern war.

Even though the philosophy espoused by Dewey and von Clausewitz, and synthesized by Boyd, show relevance to modern warfare, this dissertation extended the idea to claim the philosophy is employed in today's practical world of war; thus exemplifying the pragmatic nature of the Deweyan/Clausewitzian philosophy. This pragmatic claim rests on the fact the Deweyan/Clausewitzian philosophy, via Boyd's syntheses, forms the foundation for The United States Marine warfighting philosophy in the twenty-first century. The USMC warfighting philosophy informs and inspires the Corps' primary doctrinal document. Unlike many previous military proclamations of doctrine, the USMC philosophy is structured upon conceptual ideas concerning the *nature* of war rather than on *rules* for how to fight. Using the current USMC warfighting philosophy as a model for the practical application of the *use* of philosophy in modern wars, and having shown the derivation of this philosophy from Dewey and von Clausewitz (via Boyd), the assertion that Dewey and von Clausewitz are pertinent to contemporary warfare is logically supported.

The explication of Dewey's aesthetic philosophy and von Clausewitz's philosophy of leadership espouse a certain understanding of experience. Experience, properly understood and undergone, constitutes the aesthetic. A certain intensity in the relationship of the individual with the environment must

develop to enrich and thicken opportunity and challenge, so that the aesthetic nature of that experience becomes realized.

War is, perhaps, the ultimate environment for the burgeoning of these opportunities and challenges. Hence, war emerges as the archetype of the aesthetic. As such, contemporary wars, as true of wars past and wars future, remain the embodiment of the aesthetic. Military leaders throughout history have known the aesthetic nature of war. In an oft-quoted statement from his letter of 1862 to General Longstreet, Robert E. Lee summarized the aesthetic nature of war succinctly; “It is well that war is so terrible—lest we should grow too fond of it.” (Seldes: 239) Perhaps the aesthetic nature of war—the intense relation of mankind with the environment—bodes ill for those who hope for perpetual peace. The overpowering desire for intense experience may preclude our fondest hopes for the “end of war.”

ENDNOTES

ⁱ This dissertation will use a person's official title (capitalized) alone only if that title obviously refers to a single individual. For example, the term "the General" can only be understood to refer to Carl von Clausewitz. Likewise, "the Colonel" can only be understood to refer to John Boyd.

ⁱⁱ Von Clausewitz uses the terms "unlimited" and "absolute" to mean wars that are fought in a pure theoretical sense without interaction from, or with, the environment. He says such wars are only possible in the "abstract." *Real* war requires constant interaction with the environment; thus, actual war can never be absolute or abstract.

ⁱⁱⁱ The subsequent chapter of this dissertation demonstrates that von Clausewitz's experiential demands required for military genius are similar to demands espoused by John Dewey for the *live creature*—the person fully engaged in and with the world.

^{iv} Boyd's Energy-Maneuverability Theory (E-M) concept was paradigm shift in thinking regarding air combat. Previous theories of air-to-air combat held that the prime determinant of victory was that whichever aircraft had the most energy—either in terms of airspeed and/or altitude—held the advantage and, hence, was the most likely to win. Boyd showed this was not the case. He, instead, posited that the specific energy rate, (P_s), of an aircraft was the correct determinant.

$$P_s = [T-D][V/W]$$

Where

P_s is Specific Energy Rate

T is Thrust

D is Drag

V is Velocity

W is Weight

The core of E-M is that the aircraft that can transition between energy states most rapidly, i.e. the aircraft exhibiting the highest P_s , has the distinct advantage in combat. Boyd would use this concept, called "fast transients," to develop his overall concept of warfighting. The concept is also used today in the design of aircraft.

BIBLIOGRAPHY

Works by John Dewey

References to John Dewey's work are found in *The Collected Works of John Dewey*, edited by Jo Ann Boydston, published by Southern Illinois Press, Carbondale, IL, 1980, Print.

Citations give text abbreviation, volume number and page number(s).

The text abbreviations are:

EW *John Dewey: The Early Works*, 5 volumes, (1969-72)

MW *John Dewey: The Middle Works*, 15 volumes, (1976-88)

LW *John Dewey: The Later Works*, 17 volumes, (1981-91)

Books

LW10 *Art as Experience*

AE *Art as Experience*, New York: The Berkeley Publishing Group. 2005. Print

LW13 *Experience and Education*

LW1 *Experience and Nature*

MW14 *Human Nature and Conduct; An Introduction to Social Psychology*

MW8 *Schools of To-Morrow*

Articles and Essays

"Experience, Knowledge, and Value: A Rejoinder." [LW 14: 3-90]

Works by Carl von Clausewitz

Citations give text abbreviation and page number(s).

- HP *On War*. ed. and trans. by Michael Howard and Peter Paret. Princeton: Princeton University Press. 1981. Print
- OW *On War*. ed. Anatol Rapoport. London: Penguin Books (trans. by Colonel J. J. Graham, 1908). 1982. Print
- PW *Principles of War*. ed. and trans. by Hans W. Gatzke. Mineola, NY: Dover Publications. 2003. Print

Works by Others

- Bonaparte, Napoleon. *Napoleon's Art of War*. Trans. Lieut. Gen. Sir G. C. D'Aguilar, C. B. New York: Barnes and Noble, Inc. 2005. Print
- Boot, Max. "The Consequences of the Information Revolution." 2006. In Winston, Morton and Edelbach, Ralph. *Society, Ethics, and Technology*. Boston: Wadsworth. 2007. Print
- Boyd, John. "New Conception for Air-to-Air Combat." 4 August 1976. Briefing
- "Patterns of Conflict." December 1986. Briefing
- Brodie, Bernard. *War and Politics*. New York: Macmillan Publishing Co., Inc. 1973. Print
- Cimbala, Stephen J. *Clausewitz and Chaos: Friction in War and Military Policy*. Westport, CT: Praeger Publishers. 2001. Print
- Coram, Robert. *Boyd: The Fighter Pilot Who Changed the Art of War*. New York: Back Bay Books, Little Brown and Company. 2002. Print
- De Gaulle, Charles. "The Edge of the Sword." 1932. from Liddell Hart, Basil. *The Sword and the Pen*. Ed. Adrian Liddell Hart. New York: Thomas Y. Crowell Company. 1976. Print
- Durieux, Benoit. "Clausewitz and the Two Temptations of Modern Strategic Thinking." *Clausewitz in the Twenty-First Century*. Eds. Strachan, Hew and Andreas Herberg-Rothe. Oxford: Oxford University Press. 2007. Print
- Echevarria II, Antulio J. "Fourth Generation War and Other Myths." Carlisle, PA: Strategic Studies Institute, U.S. Army War College. 2005. Monograph

- Gallie, W.B. *Philosophers of Peace and War: Kant, Clausewitz, Marx, Engels and Tolstoy*. Cambridge: Cambridge University Press. 1878. Print
- Gelven, Michael. *War and Existence: A Philosophical Inquiry*. University Park: The Pennsylvania State University Press. 1994. Print
- Goldsworthy, Adrian. *The Punic Wars*. London: Cassell & Co. 2000. Print
- Gray, J. Glenn. *The Warriors: Reflections on Men in Battle*. Lincoln: University of Nebraska Press. 1998. Print
- Hildebrand, David L. *Dewey: A Beginner's Guide*. Oxford: Oneworld Publications. 2008. Print
- Howard, Michael. *Clausewitz: A Very Short Introduction*. New York: Oxford University Press. 2002. Print
- Jomini, Baron Antoine Henri. *The Art of War*. Westport, CT: Greenwood Press. 1862. Print
- Lawrence, T. E. "The Evolution of a Revolt." n.d. from Liddell Hart, Basil. *The Sword and the Pen*. Ed. Adrian Liddell Hart. New York: Thomas Y. Crowell Company. 1976. Print
- Liddell Hart, Basil. *The Sword and the Pen*. Ed. Adrian Liddell Hart. New York: Thomas Y. Crowell Company. 1976. Print
- Machiavelli, Niccolò. *The Art of War*. Mineola, NY: Dover Publications, Inc. 2006. Print
- McDermott, John J. *The Philosophy of John Dewey*. Chicago: The University of Chicago Press. 1981. Print
- McDermott, John J. *The Drama of Possibility: Experience as Philosophy of Culture*. Ed. Douglas R. Anderson. New York: Fordham University Press. 2007. Print
- Moran, Lord. *The Anatomy of Courage*. Garden City Park, NY: Avery Publishing Group, Inc. 1966. Print
- O'Connell, Robert L. *The Ghosts of Cannae: Hannibal and the Darkest Hour of the Roman Republic*. New York: Random House, Inc. 2010. Print

Osinga, Frans. "A Discourse on Winning and Losing: Introducing Core Ideas and Themes of Boyd's 'Theory of intellectual Evolution and Growth.'" Quantico Marine Corps Base. 13 July 2007. Briefing

Pappas, Gregory F. *John Dewey's Ethics*. Bloomington: Indiana University Press. 2008. Print

Paret, Peter. *The Cognitive Challenge of War*. Princeton: Princeton University Press. 2009. Print

Seldes, George. *The Great Thoughts*. New York: Ballantine Books. 1985. Print

Singer, P.W. *Wired for War: The Robotics Revolution and Conflict in the Twenty-First Century*. New York: The Penguin Press. 2009. Print

Stroh, Guy W. *American Philosophy from Edwards to Dewey: An Introduction*. Princeton: D. Van Nostrand Company, Inc. 1968. Print

Sun Tzu. *The Art of War*. Mineola, NY: Dover Publications, Inc. 2002. Print

Internet Resources

Boyd, John. "Destruction and Creation." (Amended). Goal Systems International. Web. 30 April 2011.

Bassford, Christopher. "Jomini and Clausewitz: Their Interaction." The Clausewitz Homepage. Web. 2 March 2011.

_____. "The Battle of Cannae, 216 BC: The destruction of the Roman Army." (Map). August 2008. Ancient Times. Web. 11 April 2011.

_____. "Cannae and Vicinity, 216 BC: Initial Roman Attack and Defeat of the Roman Cavalry." (Map). Ancient Times. Web. 11 April 2011.

_____. FMFM 1 (Fleet Marine Field Manual 1). 1986. *Warfighting*. The Clausewitz Homepage, Web. 29 March 2011

Heiser, John. "Voices of Battle: Colonel Joshua Chamberlain and the 20th Maine Infantry." 2008. National Parks Service. Web. 29 March 2011.

____ MCDP 1 (Marine Corps Doctrinal Pamphlet 1). *Warfighting*. 1997. Web. 7 April 2011.

Patton, George S. "George S. Patton Quotes." Brainy Quote. Web. 25 April 2011.

____ "Quotes about Marines." Web. 9 April 2011.

APPENDIX I

DESTRUCTION AND CREATION

by
John R. Boyd

3 September 1976

ABSTRACT

To comprehend and cope with our environment we develop mental patterns or concepts of meaning. The purpose of this paper is to sketch out how we destroy and create these patterns to permit us to both shape and be shaped by a changing environment. In this sense, the discussion also literally shows why we cannot avoid this kind of activity if we intend to survive on our own terms. The activity is dialectic in nature generating both disorder and order that emerges as a changing and expanding universe of mental concepts matched to a changing and expanding universe of observed reality.

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Studies of human behavior reveal that the actions we undertake as individuals are closely related to survival, more importantly, survival on our own terms. Naturally, such a notion implies that we should be able to act relatively free or independent of any debilitating external influences—otherwise that very survival might be in jeopardy. In viewing the instinct for survival in this manner we imply that a basic aim or goal, as individuals, is *to improve our capacity for independent action*. The degree to which we cooperate, or compete, with others is driven by the need to satisfy this basic goal. If we believe that it is not possible to satisfy it alone, without help from others, history shows us that we will agree to constraints upon our independent action—in order to collectively pool skills and talents in the form of nations, corporations, labor unions, mafias, etc. —so that obstacles standing in the way of the basic goal can either be removed or overcome. On the other hand, if the group cannot or does not attempt to overcome obstacles deemed important to many (or possibly any) of its individual members, the group must risk losing these alienated members. Under these circumstances, the alienated members may dissolve their relationship and remain independent, form a group of their own, or join another collective body in order *to improve their capacity for independent action*.

In a real world of limited resources and skills, individuals and groups form, dissolve and reform their cooperative or competitive postures in a continuous struggle to remove or overcome physical and social environmental obstacles.[11,13] In a cooperative sense, where skills and talents are pooled, the removal or overcoming of obstacles represents an improved capacity for independent action

for all concerned. In a competitive sense, where individuals and groups compete for scarce resources and skills, an improved capacity for independent action achieved by some individuals or groups constrains that capacity for other individuals or groups. Naturally, such a combination of real world scarcity and goal striving to overcome this scarcity intensifies the struggle of individuals and groups to cope with both their physical and social environments.[11,13]

Against such a background, actions and decisions become critically important. Actions must be taken over and over again and in many different ways. Decisions must be rendered to monitor and determine the precise nature of the actions needed that will be compatible with the goal. To make these timely decisions implies that we must be able to form mental concepts of observed reality, as we perceive it, and be able to change these concepts as reality itself appears to change. The concepts can then be used as decision models for improving our capacity for independent action. Such a demand for decisions that literally impact our survival causes one to wonder: How do we generate or create the mental concepts to support this decision-making activity?

There are two ways in which we can develop and manipulate mental concepts to represent observed reality: we can start from a comprehensive whole and break it down to its particulars or we can start with the particulars and build towards a comprehensive whole.[28,24] Saying it another way, but in a related sense, we can go from the general-to-specific or from the specific-to-general. A little reflection here reveals that deduction is related to proceeding from the general-to-specific while induction is related to proceeding from the specific-to-general. In following this line of thought, can we think of other activities that are related to these two opposing ideas? Is not analysis related to proceeding from the general-to-specific? Is not synthesis, the opposite of analysis, related to proceeding from the specific-to-general? Putting all this together: Can we not say that general-to-specific is related to both deduction and analysis, while specific-to-general is related to induction and synthesis? Now, can we think of some examples to fit with these two opposing ideas? We need not look far. The differential calculus proceeds from the general-to-specific—from a function to its derivative. Hence, is not the use or application of the differential calculus related to deduction and analysis? The integral calculus, on the other hand, proceeds in the opposite direction— from a derivative to a general function. Hence, is not the use or application of the integral calculus related to induction and synthesis? Summing up, we can see that: *general-to-specific* is related to *deduction*, *analysis*, and *differentiation*, while, *specific-to-general* is related to *induction*, *synthesis*, and *integration*.

Now keeping these two opposing idea chains in mind let us move on a somewhat different tack. Imagine, if you will, a domain (a comprehensive whole) and its constituent elements or parts. Now, imagine another domain and its constituent parts. Once again, imagine even another domain and its constituent parts. Repeating this idea over and over again we can imagine any number of

domains and the parts corresponding to each. Naturally, as we go through life we develop concepts of meaning (with included constituents) to represent observed reality. Can we not liken these concepts—and their related constituents—to the domains and constituents that we have formed in our imagination? Naturally, we can. Keeping this relationship in mind, suppose we shatter the correspondence of each domain or concept with its constituent elements. In other words, we imagine the existence of the parts but pretend that the domains or concepts they were previously associated with do not exist. Result: We have many constituents, or particulars, swimming around in a sea of anarchy. We have uncertainty and disorder in place of meaning and order. Further, we can see that such an *unstructuring* or *destruction* of many domains—to break the correspondence of each with its respective constituents—is related to *deduction*, *analysis*, and *differentiation*. We call this kind of unstructuring a *destructive deduction*.

Faced with such disorder or chaos, how can we reconstruct order and meaning? Going back to the idea chain of specific-to-general, induction, synthesis, and integration, the thought occurs that a new domain or concept can be formed if we can find some common qualities, attributes, or operations among some or many of these constituents swimming in this sea of anarchy. Through such connecting threads (that produce meaning) we synthesize constituents from, hence across, the domains we have just shattered.[24] Linking, particulars together in this manner we can form a new domain or concept—providing, of course, we do not inadvertently use *only* those "bits and pieces" in the same arrangement that we associated with one of the domains purged from our imagination. Clearly, such a synthesis would indicate we have generated something new and different from what previously existed. Going back to our idea chain, it follows that *creativity* is related to induction, synthesis, and integration since we proceeded from unstructured bits and pieces to a new general pattern or concept. We call such action a *creative* or *constructive induction*. It is important to note that the crucial or key step that permits this creative induction is the separation of the particulars from their previous domains by the destructive deduction. Without this unstructuring the creation of a new structure cannot proceed—since the bits and pieces are still tied together as meaning within unchallenged domains or concepts.

Recalling that we use concepts or mental patterns to represent reality, it follows that the unstructuring and restructuring just shown reveals a way of changing our perception of reality.[28] Naturally, such a notion implies that the emerging pattern of ideas and interactions must be internally consistent and match up with reality.[14,15] To check or verify internal consistency we try to see if we can trace our way back to the original constituents that were used in the creative or constructive induction. If we cannot reverse directions, the ideas and interactions do not go together in this way without contradiction. Hence, they are not internally consistent. However, this does not necessarily mean we reject and throw away the entire structure. Instead, we should attempt to identify those ideas (particulars)

and interactions that seem to hold together in a coherent pattern of activity as distinguished from those ideas that do not seem to fit in. In performing this task, we check for reversibility as well as check to see which ideas and interactions match up with our observations of reality.[27,14,15] Using those ideas and interactions that pass this test, together with any new ideas (from new destructive deductions) or other promising ideas that popped out of the original destructive deduction, we again attempt to find some common qualities, attributes, or operations to re-create the concept—or create a new concept. Also, once again, we perform the check for reversibility and match-up with reality. Over and over again, this cycle of *Destruction* and *Creation* is repeated until we demonstrate internal consistency and match-up with reality. [19,14,15]

When this orderly (and pleasant) state is reached the concept becomes a coherent pattern of ideas and interactions that can be used to describe some aspect of observed reality. As a consequence, there is little or no further appeal to alternative ideas and interactions in an effort to either expand, complete, or modify the concept. [19] Instead, the effort turned inward towards fine-tuning the ideas and interactions in order to improve generality and produce a more precise match of the conceptual pattern with reality.[19] Toward this end, the concept—and its internal workings—is tested and against observed phenomena over and over again in many different and subtle ways.[19] Such a repeated and inward-oriented effort to explain increasingly more subtle aspects of reality suggests the disturbing idea that perhaps, at some point, ambiguities, uncertainties, anomalies, or apparent inconsistencies may emerge to stifle a more general and precise match-up of concept with observed reality.[19] Why do we suspect this?

On one hand, we realize that facts, perceptions, ideas, impressions, interactions, etc. separated from *previous* observations and thought patterns have been *linked* together to create a new conceptual pattern. On the other hand, we suspect that refined observations now underway will eventually exhibit either more or a different kind of precision and subtlety than the previous observations and thought patterns. Clearly, any anticipated difference, or differences, suggests we should expect a mismatch between the new observations and the anticipated concept description of these observations. To assume otherwise would be tantamount to admitting that previous constituents and interactions would produce the same synthesis as any newer constituents and interactions that exhibit either more or a different kind of precision and subtlety. This would be like admitting one equals two. To avoid such a discomfiting position implies that we should anticipate a mismatch between phenomena observation and concept description of that observation. Such a notion is not new and is indicated by the discoveries of Kurt Gödel and Werner Heisenberg.

In 1931 Kurt Gödel created a stir in the World of Mathematics and Logic when he revealed that it was impossible to embrace mathematics within a single system of logic.[12,23] He accomplished this by proving, first, that *any consistent*

system—that includes the arithmetic of whole numbers—is *incomplete*. In other words, there are true statements or concepts within the system that cannot be deduced from the postulates that make up the system. Next, he proved *even though such a system is consistent its consistency cannot be demonstrated within the system*.

Such a result does not imply that it is impossible to prove the consistency of a system. It only means that such a proof cannot be accomplished inside the system. As a matter of fact, since Gödel, Gerhard Gentzen and others have shown that a consistency proof of arithmetic can be found by appealing to systems outside that arithmetic. Thus, Gödel's Proof indirectly shows that in order to determine the consistency of any new system we must construct or uncover another system beyond it.[29,27] Over and over this cycle must be repeated to determine the consistency of more and more elaborate systems. [29,27]

Keeping this process in mind, let us see how Gödel's results impact the effort to improve the match-up of concept with observed reality: To do this we will consider two kinds of consistency: The consistency of the concept and the consistency of the match-up between observed reality and concept description of reality. In this sense, if we assume—as a result of previous destructive deduction and creative induction efforts—that we have a consistent concept and consistent match-up, we should see no differences between observation and concept description. Yet, as we have seen, on one hand, we use observations to shape or formulate a concept; while on the other hand, we use a concept to shape the nature of future inquiries or observations of reality. Back and forth, over and over again, we use observations to sharpen a concept and a concept to sharpen observations. Under these circumstances, a concept must be incomplete since we depend upon an ever-changing array of observations to shape or formulate it. Likewise, our observations of reality must be incomplete since we depend upon a changing concept to shape or formulate the nature of new inquiries and observations. Therefore, when we probe back and forth with more precision and subtlety, we must admit that we can have differences between observation and concept description; hence, we cannot determine the consistency of the system—in terms of its concept, and matchup with observed reality—within itself.

Furthermore, the consistency cannot be determined even when the precision and subtlety of observed phenomena approaches the precision and subtlety of the observer—who is employing the ideas and interactions that play together in the conceptual pattern. This aspect of consistency is accounted for not only by Gödel's Proof but also by the Heisenberg Uncertainty or Indeterminacy Principle.

The Indeterminacy Principle uncovered by Werner Heisenberg in 1927 showed that one could not simultaneously fix or determine precisely the velocity and position of a particle or body.[14,9] Specifically he showed, due to the presence and influence of an observer, that the product of the velocity and position uncertainties is equal to or greater than a small number (Planck's Constant) divided

by the mass of the particle or body being investigated. In other words:

$$\mathbf{VQ} \geq \mathbf{h/m}$$

Where

V is velocity uncertainty

Q is position uncertainty and

h/m is Planck's constant (**h**) divided by observed mass (**m**).

Examination of Heisenberg's Principle reveals that as mass becomes exceedingly small, the uncertainty, or indeterminacy, becomes exceedingly large. Now—in accordance with this relation—when the precision, or mass, of phenomena being observed is little or no different than the precision, or mass, of the observing phenomena, the uncertainty values become as large as, or larger than, the velocity and size frame-of-reference associated with the bodies being observed.[9] In other words, when the intended distinction between observer and observed begins to disappear[3], the uncertainty values hide or mask phenomena behavior; or put another way, the observer perceives uncertain or erratic behavior that bounces all over in accordance with the indeterminacy relation. Under these circumstances, uncertainty values represent the inability to determine the character or nature (consistency) of a system within itself. On the other hand, if the precision and subtlety of the observed phenomena is much less than the precision and subtlety of the observing phenomena the uncertainty values become much smaller than the velocity and size values of the bodies being observed.[2] Under these circumstances, the character or nature of a system can be determined—although not exactly—since the uncertainty values do not hide or mask observed phenomena behavior nor indicate significant erratic behavior.

Keeping in mind that the Heisenberg Principle implicitly depends upon the indeterminate presence and influence of an observer,[14] we can now see—as revealed by the two examples just cited—that the magnitude of the uncertainty values represent the degree of intrusion by the observer upon the observed. When intrusion is total (that is, when the intended distinction between observer and observed essentially disappears [3]), the uncertainty values indicate erratic behavior. When intrusion is low, the uncertainty values do not hide or mask observed phenomena behavior, nor indicate significant erratic behavior. In other words, the uncertainty values not only represent the degree of intrusion by the observer upon the observed but also the degree of confusion and disorder

perceived by that observer.

Confusion and disorder are also related to the notion of Entropy and the Second Law of Thermodynamics.[11,20] Entropy is a concept that represents the potential for doing work, the capacity for taking action, or the degree of confusion and disorder associated with any physical or information activity. High entropy implies a low potential for doing work, a low capacity for taking action or a high degree of confusion and disorder. Low entropy implies just the opposite. Viewed in this context, the Second-Law of Thermodynamics states that all observed natural processes generate entropy.[20] From this law it follows that entropy must increase in any closed system—or, for that matter, in any system that cannot communicate in an ordered fashion with other systems or environments external to itself. Accordingly, whenever we attempt to do work or take action inside such a system—a concept and its match-up with reality—we should anticipate an increase in entropy, hence an increase in confusion and disorder. Naturally, this means *we cannot determine the character or nature (consistency) of such a system within itself*, since the system is moving irreversibly toward a higher, yet unknown, state of confusion and disorder.

What an interesting outcome! According to Gödel we cannot—in general—determine the consistency, hence the character or nature, of an abstract system within itself. According to Heisenberg and the Second Law of Thermodynamics any attempt to do so in the real world will expose uncertainty and generate disorder. Taken together, these three notions support the idea that any inward-oriented and continued effort to improve the match-up of concept with observed reality will only increase the degree of mismatch. Naturally, in this environment, uncertainty and disorder will increase, as previously indicated by the Heisenberg Indeterminacy Principle and the Second Law of Thermodynamics, respectively. Put another way, we can expect unexplained and disturbing ambiguities, uncertainties, anomalies, or apparent inconsistencies to emerge more and more often. Furthermore, unless some kind of relief is available, we can expect confusion to increase until disorder approaches chaos— death.

Fortunately, there is a way out. Remember, as previously shown, we can forge a new concept by applying the destructive deduction and creative induction mental operations. Also, remember, in order to perform these dialectic mental operations we must first shatter the rigid conceptual pattern, or patterns, firmly established in our mind. (This should not be too difficult since the rising confusion and disorder is already helping us to undermine any patterns). Next, we must find some common qualities, attributes, or operations to link isolated facts, perceptions, ideas, impressions, interactions, observations, etc., together as possible concepts to represent the real world. Finally, we must repeat this unstructuring and restructuring until we develop a concept that begins to match-up with reality. By doing this—in accordance with Gödel, Heisenberg and the Second Law of Thermodynamics—we find that the uncertainty and disorder generated by an

inward-oriented system to talking to itself can be offset by going outside and creating a new system. Simply stated, uncertainty and related disorder can be diminished by the direct artifice of creating a higher and broader more general concept to represent reality.

However, once again, when we begin to turn inward and use the new concept—within its own pattern of ideas and interactions—to produce a finer grain match with observed reality we note that the new concept and its match-up with observed reality begins to self-destruct just as before. Accordingly, the dialectic cycle of destruction and creation begins to repeat itself once again. In other words, as suggested by Gödel's Proof of Incompleteness, we imply that the process of Structure, Unstructure, Restructure, Unstructure, Restructure is repeated endlessly in moving to higher and broader levels of elaboration. In this unfolding drama, the alternating cycle of entropy increase toward more and more disorder and the entropy decrease toward more and more order appears to be one part of a control mechanism that literally seems to drive and regulate this alternating cycle of destruction and creation toward higher and broader levels of elaboration. Now, in relating this deductive/inductive activity to the basic goal discussed in the beginning, I believe we have uncovered a Dialectic Engine that permits the construction of decision models needed by individuals and societies for determining and monitoring actions in an effort to improve their capacity for independent action. Furthermore, since this engine is directed toward satisfying this basic aim or goal, it follows that the goal-seeking effort itself appears to be the other side of a control mechanism that seems also to drive and regulate the alternating cycle of destruction and creation toward higher and broader levels of elaboration. In this context, when acting within a rigid or essentially a closed system, the goal seeking effort of individuals and societies to improve their capacity for independent action tends to produce disorder towards randomness and death. On the other hand, as already shown, the increasing disorder generated by the increasing mismatch of the system concept with observed reality opens or unstructures the system. As the unstructuring or, as we'll call it, the destructive deduction unfolds, it shifts toward a creative induction to stop the trend toward disorder and chaos to satisfy a goal-oriented need for increased order. Paradoxically, then, an entropy increase permits both the destruction, or unstructuring, of a closed system and the creation of a new system to nullify the march toward randomness and death. Taken together, the entropy notion associated with the Second Law of Thermodynamics and the basic goal of individuals and societies seem to work in dialectic harmony driving and regulating the destructive/ creative, or deductive/inductive, action— that we have described herein as a dialectic engine. The result is a changing and expanding universe of mental concepts matched to a changing and expanding universe of observed reality.[28,27] As indicated earlier, these mental concepts are employed as decision models by individuals and societies for determining and monitoring actions needed

to cope with their environment—or to improve their capacity for independent action.

DESTRUCTION AND CREATION BIBLIOGRAPHY

1. Beveridge, W.I.B, *The Art of Scientific Investigation*, Vintage Books, Third Edition (1957)
2. Boyd, John R., *Destruction and Creation* (23 Mar 1976)
3. Brown, G. Spencer, *Laws of Form*, Julian Press, Inc. (1972)
4. Conant, James Bryant, "Two Modes of Thought," *Credo Perspectives*, Simon and Schuster (1970)
5. DeBono, Edward, *New Think*, Avon Books (1971)
6. DeBono, Edward, *Lateral Thinking: Creativity Step by Step*, Harper Colophon Books (1973)
7. Foster, David, *The Intelligent Universe*, Putnam (1975)
8. Fromm, Erich, *The Crisis of Psychoanalysis*, Fawcett Premier Books (1971)
9. Gamow, George, *Thirty Years That Shook Physics*, Anchor Books (1966)
10. Gardner, Howard, *The Quest for Mind*, Vintage Books (1974)
11. Georgescu-Roegen, Nicholas, *The Entropy Law and the Economic Process*, Harvard University Press (1971)
12. Gödel, Kurt, "On Formally Undecidable Propositions of the Principia Mathematica and Related Systems," pages 3-38, *The Undecidable*, Raven Press (1965)
13. Heilbroner, Robert L., *An Inquiry into the Human Prospect*, Norton and Co. (1974)
14. Heisenberg, Werner, *Physics and Philosophy*, Harper Torchbooks (1962)
15. Heisenberg, Werner, "Across the Frontiers," *World Perspectives*, Harper and Row (1974)
16. Foyle, Fred, "Encounter with the Future", *Credo Perspectives*, Simon and Schuster (1968)
17. Hoyle, Fred, "The New Face of Science", *Perspectives in Humanism*, World Publishing Co. (1971)
18. Kramer, Edna E., "The Nature' and Growth of Modern Mathematics", Fawcett Premier Books (1974)
19. Kuhn, Thomas S., *The Structure of Scientific Revolutions*, University of Chicago Press (1970)

20. Layzer, David, "The Arrow of Time", *Scientific American* (December 1975)
21. Levinson, Harry, *The Exceptional Executive*, Mentor Books (1971)
22. Maltz, Maxwell, *Psycho-Cybernetics*, Wilshire Book Co. (1971)
23. Nagel, Ernest and Newman, James R., *Gödel's Proof*, New York University Press (1958)
24. Osborne, Alex F., *Applied Imagination*, Scribners and Sons (1963)
25. Pearce, Joseph Chilton, *The Crack in the Cosmic Egg*, Pocket Books (1975)
26. Pearce, Joseph Chilton, *Exploring the Crack in the Cosmic Egg*, Pocket Books (1975)
27. Piaget, Jean, *Structuralism*, Harper Torchbooks (1971)
28. Polanyi, Michael, *Knowing and Being*, University of Chicago Press (1969)
29. Singh, Jagjit, *Great Ideas of Modern Mathematics: Their Nature and Use*, Dover (1959)
30. Skinner, B.F., *Beyond Freedom and Dignity*, Bantam/Vintage Books (1972)
31. Thompson, William Irwin, *At the Edge of History*, Harper Colophon Books (1972)
32. Thompson, William Irwin, *Evil and World Order, World Perspective*, Harper and Row (1976)
33. Tse-Tung, Mao, *Four Essays on China and World Communism*, Lancer Books (1972)
34. Waismann, Friedrich, *Introduction to Mathematical Thinking*, Harper Torchbooks (1959)
35. Watts, Alan, *The Book*, Vintage Books (1972)
36. Yukawa, Hideki, *Creativity and Intuition*, Kodansha International Ltd. (1973)

APPENDIX II

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Warfighting

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VITA

Name: Oak Herbert De Berg

Address: Department of Philosophy
Texas A&M University
314 Bolton Hall
4237 TAMU
College Station, TX 77843-4237

Email Address: o-deberg@philosophy.tamu.edu

Education (Academic): B. S., Chemistry, University of California at Berkeley, 1965
B. A., Philosophy, *Summa cum laude*, University of Texas at San Antonio, 2005
M. S., Aerospace Engineering, Air Force Institute of Technology, 1969
Ph. D., Philosophy, Texas A&M University, 2011

(Professional): Certified Flight Instructor, 1976
Air Command and Staff College, *Distinguished graduate*, 1977
Industrial College of the Armed Forces (non-resident program), 1978
Defense Systems Management College, 1983
Executive Development Program, Texas A&M University, 1987
Certified Financial Planner, 1996

Oak Herbert De Berg retired from the United States Air Force (USAF), with the rank of colonel, after thirty years of service. He served as missile combat crew commander. As an aerospace engineer he developed flight equations for remotely piloted vehicles, designed advanced navigation scenarios, analyzed success factors in air-to-air combat, and investigated stability factors contributing to aircraft accidents. Colonel De Berg served as an executive secretary to the Air Force Scientific Advisory Board and was responsible for investigating scientific issues for the USAF Chief of Staff and the Secretary of the Air Force. His service includes liaison with the United States Congress and as a delegate to, and technical advisor for, the Strategic Arms Reduction Treaty and Intermediate Range Nuclear Forces Treaty negotiations with the Soviet Union. He ended his career as the Deputy Chief of Staff of the Air Force Systems Command. His academic interests are focused on philosophical issues pertaining to the military, industrial, and political arenas.